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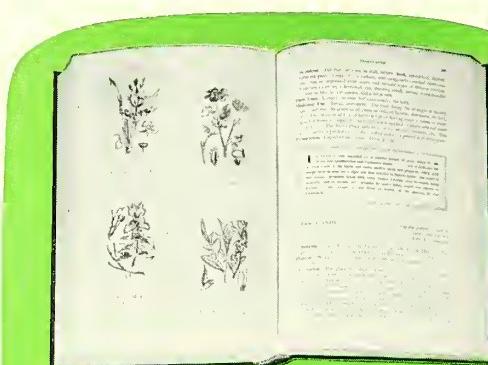
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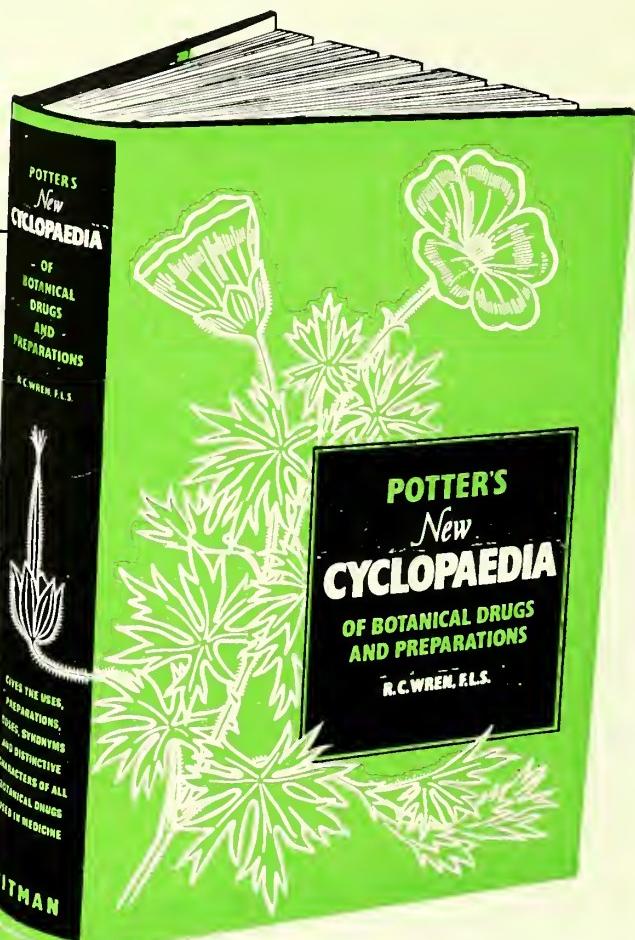
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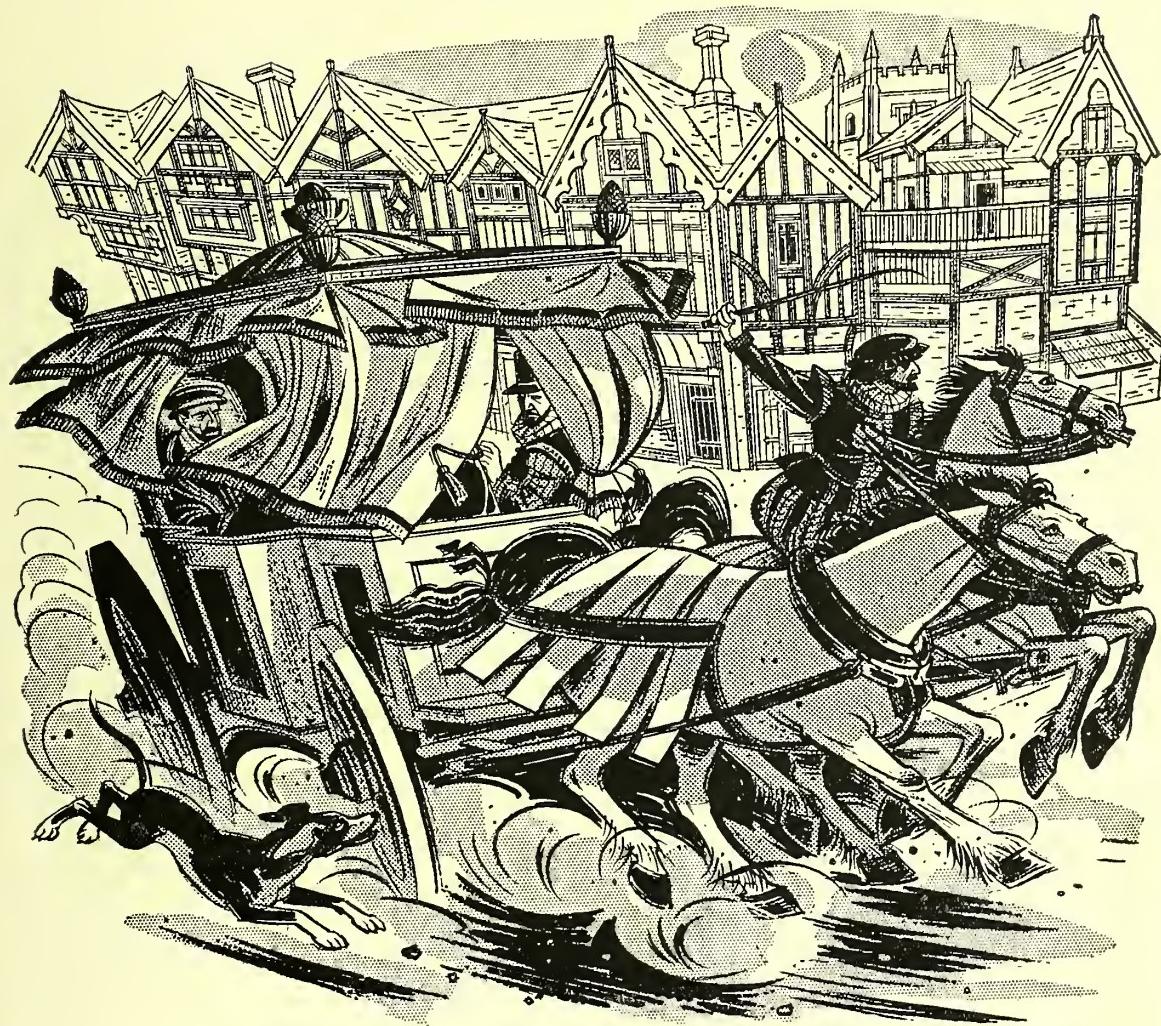
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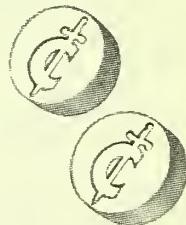


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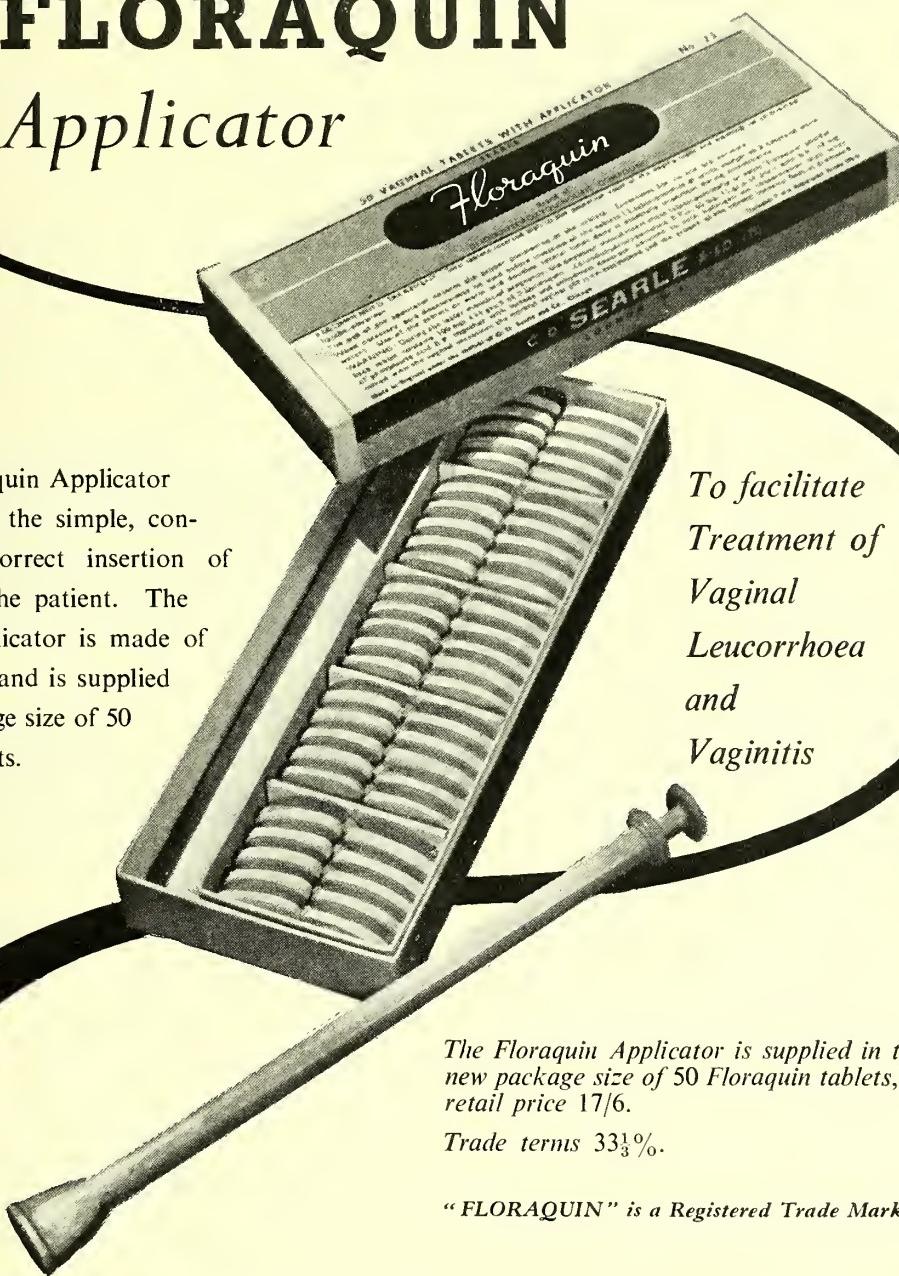
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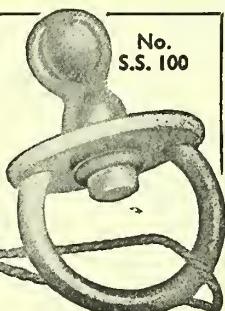
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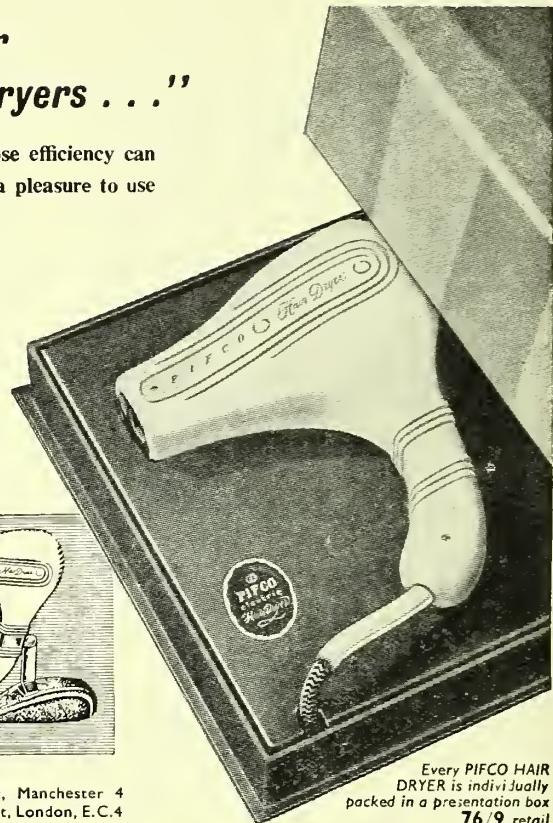
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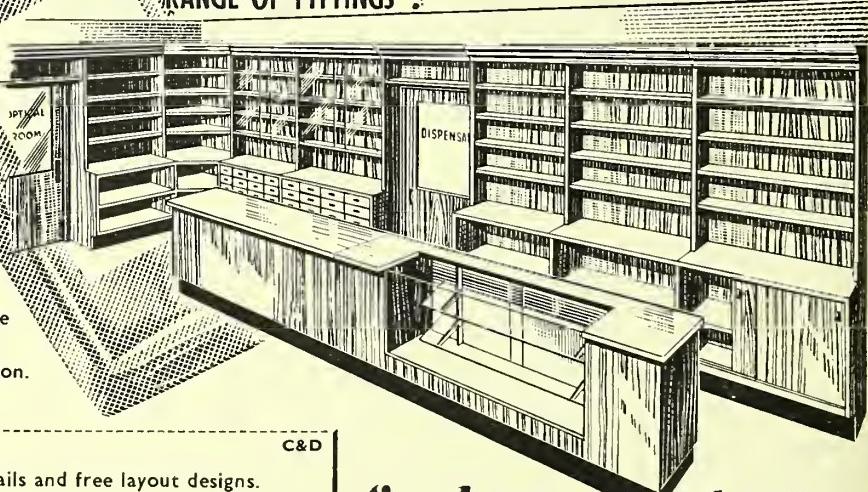
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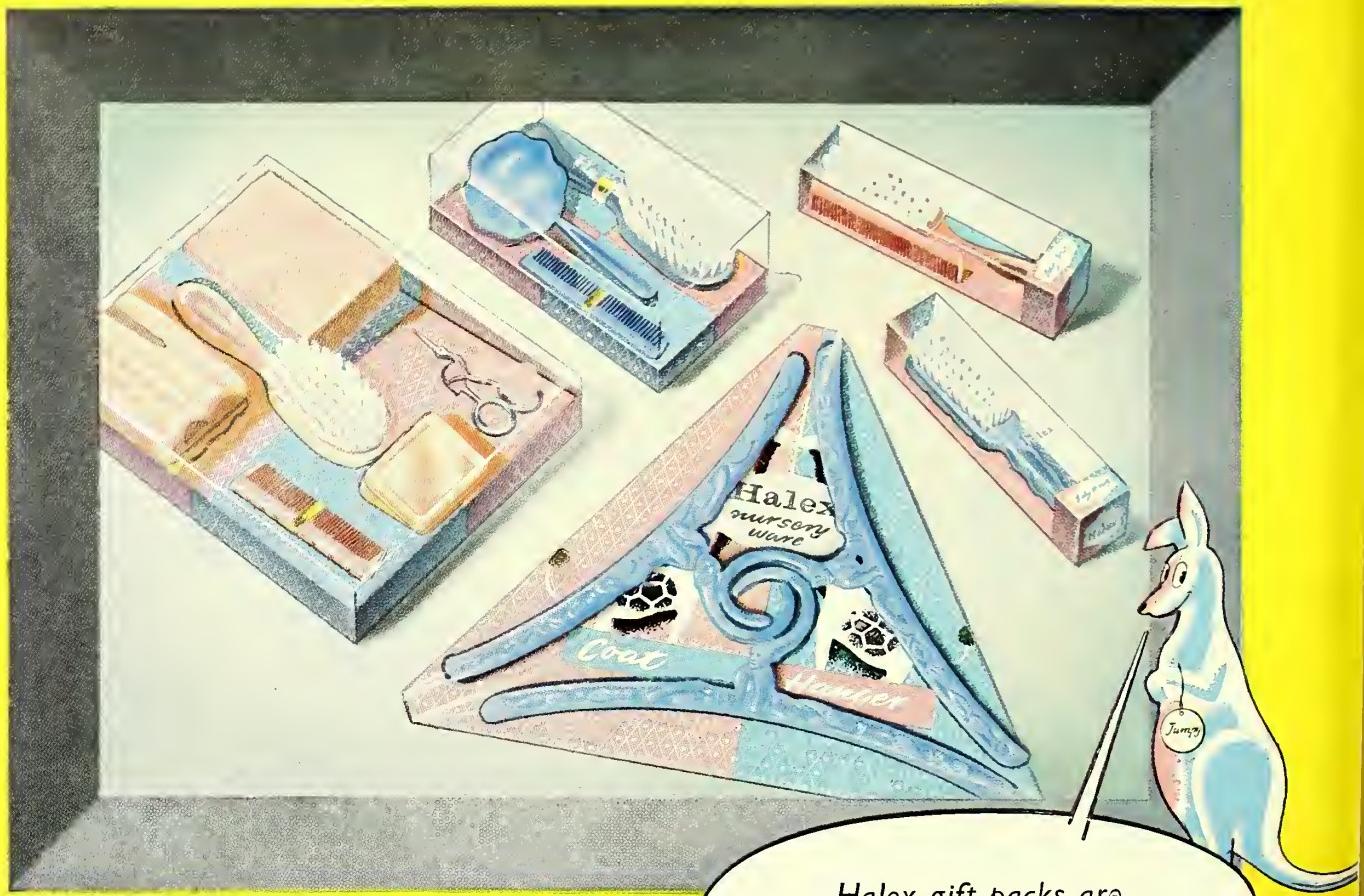


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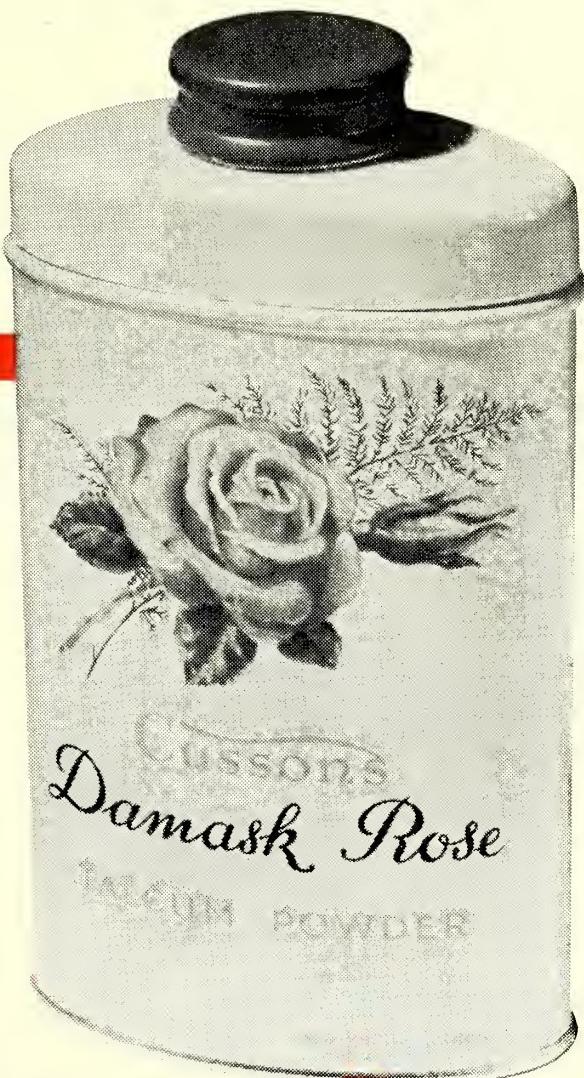
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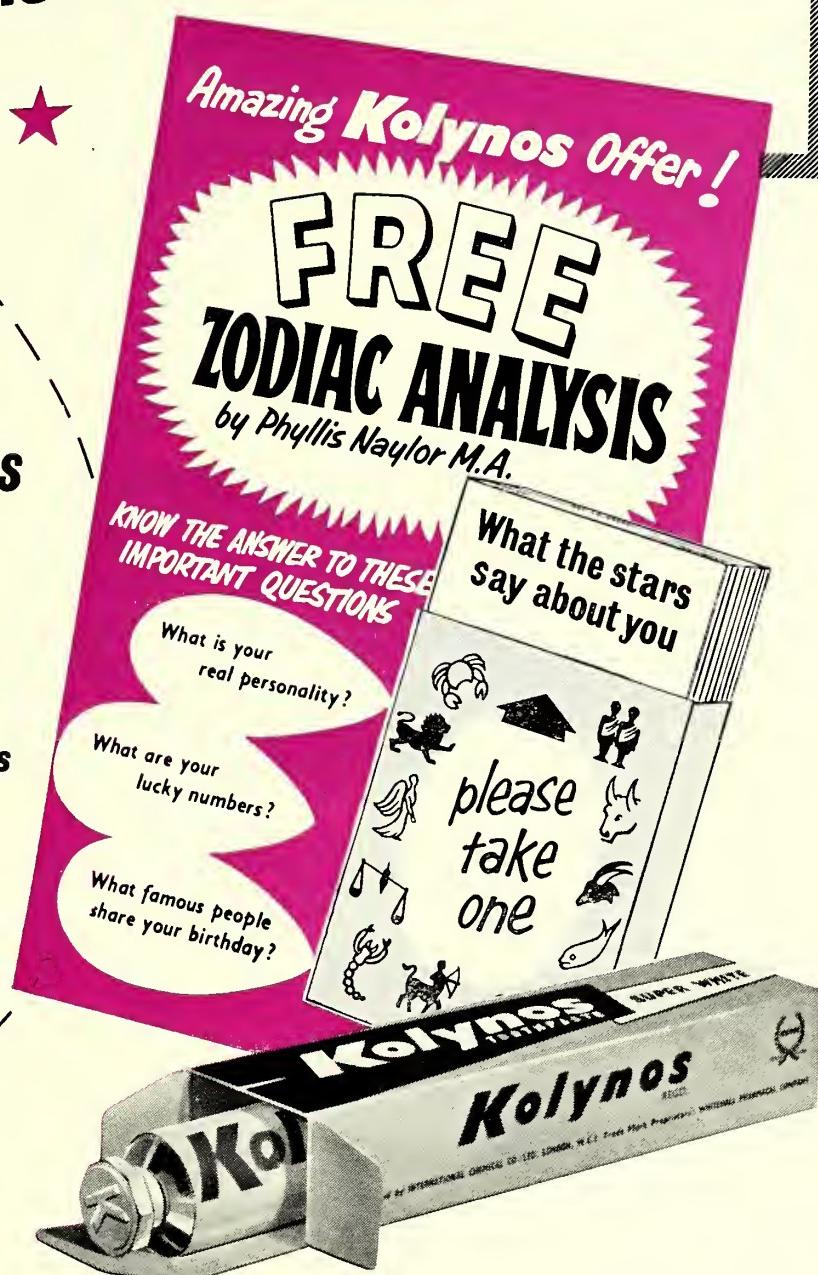
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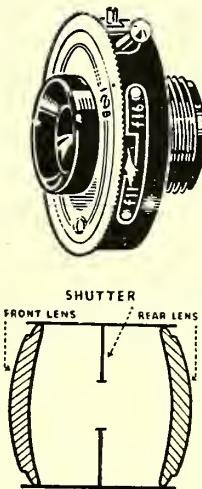
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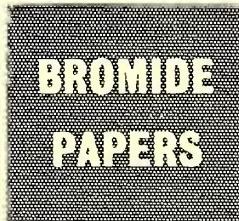
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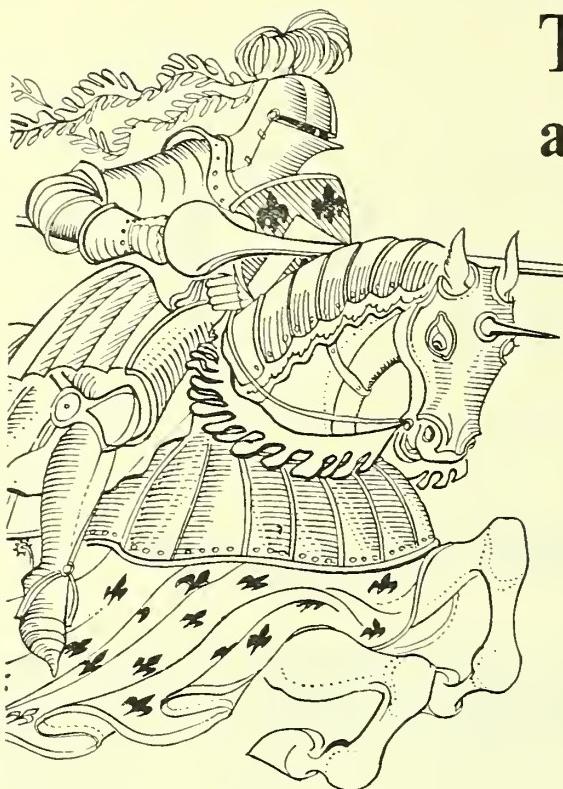
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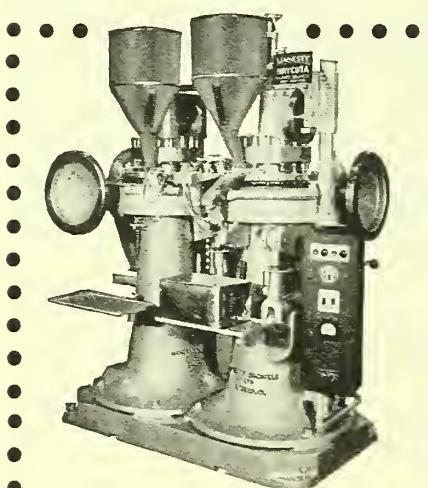
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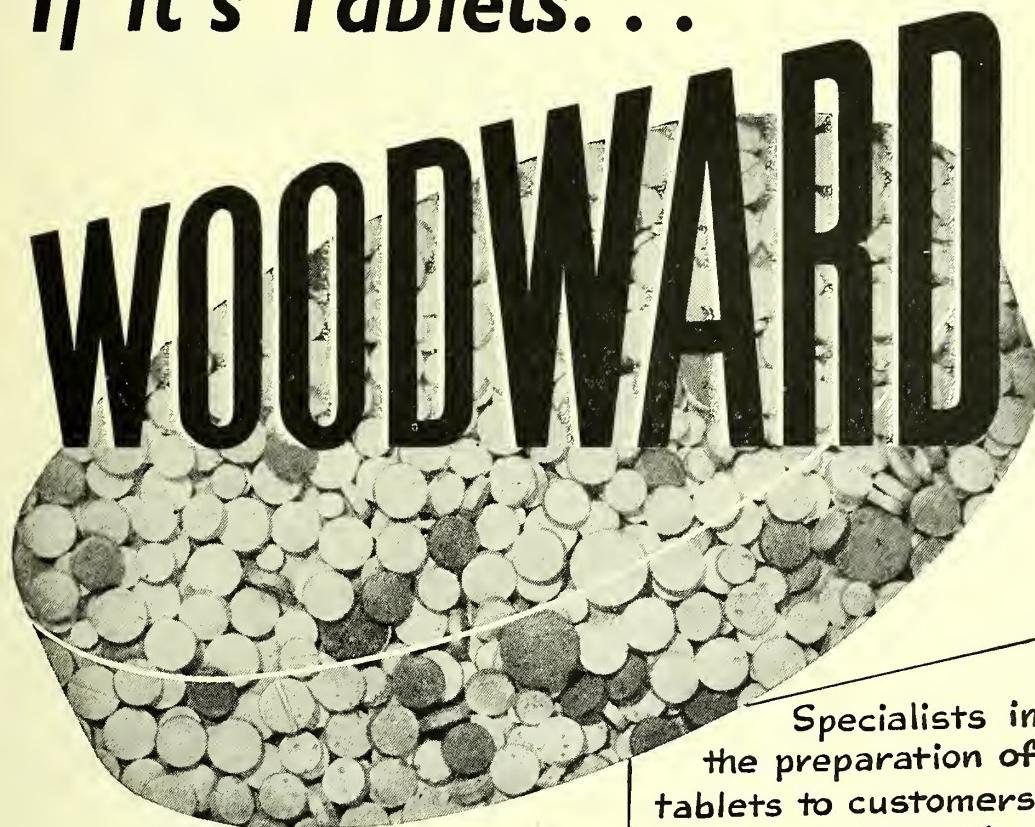
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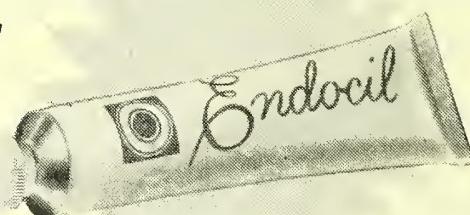
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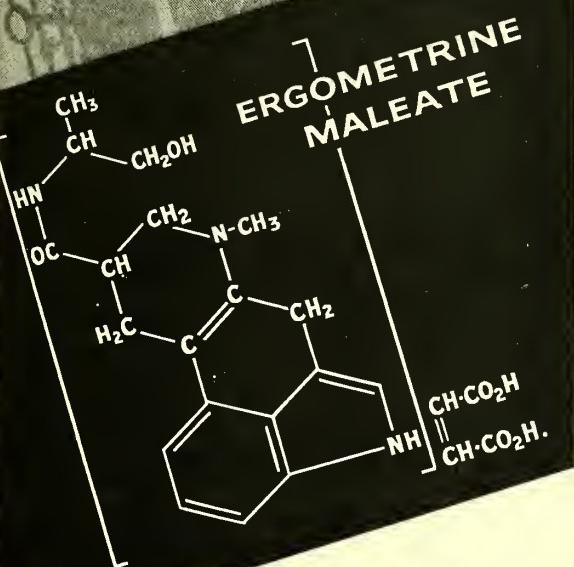
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# THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

The weekly newspaper for pharmacy and all sections of the drug, pharmaceutical and fine chemical, cosmetic, and allied industries

Official organ of the Pharmaceutical Society of Ireland and the Pharmaceutical Society of Northern Ireland

Volume 166

July 21, 1956

No. 3987

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- References**
- Lancet, 1955, i, 669
  - ibid. 1955, i, 819
  - Arch. Dis. Childh., 1955, 30, 299
  - ibid. 1955, 30, 501
  - Practitioner, 1955, 175, 378
  - Lancet, 1956, i, 720
  - ibid. 1956, i, 966

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# The CHEMIST AND DRUGGIST

Volume 166

JULY 21, 1956

No. 3987

## FUTURE RÔLE OF P.A.T.A. AS IMPORTANT AS IN PAST SIXTY YEARS

THE council of the Proprietary Articles Trade Association has issued a statement affirming its belief that under the Restrictive Trade Practices Act, the function of the Association will be no less important in the future than it has been in the past sixty years.

The statement points out that a revised constitution and rules are being settled by counsel and submitted to the executive committee at its meeting in September and, subject to any amendments proposed by the executive committee, are being submitted for adoption to the council at its October meeting and for endorsement by the members of the Association in special meeting at a later date.

Counsel advise that, in their view, the Association's rules need not be of such a character as to require registration. They do not consider that the Association will be rendered ineffective if the rules are so framed. Rules drawn in that fashion would allow the Association (where the manufacturer agreed) to take charge of proceedings under Section 24 of the Act and the effective use of Section 24 may well eliminate price-cutting of goods marketed by the manufacturers' section of the Association.

The council has already considered, and approved in principle, the main additions and amendment to the rules, as suggested by counsel. It is proposed that the objects of the Association should be: (1) The discussion of matters of common interest to those engaged in the proprietary articles trade; (2) the furnishing to its members of advice, information and assistance (financial or otherwise) relating to matters of common interest; (3) the doing of all such other things as may be lawful and in the common interest of its members.

Of the four rules which would deal with the new functions of the Association, the following draft rule: "The council or any subcommittee duly appointed by the council may in any case where a member is or proposes to be a party to legal proceedings relating to matters of common interest to members authorise assistance (financial or otherwise) to be given by the officers, servants or agents of the Association in connection with such proceedings," would enable the Association to conduct proceedings under Section 24 and to defray legal costs.

Other rules deal with membership, the issue of a list of proprietary articles, and the circulation of information likely to be of interest to the Association's members.

General for Victoria, Victoria House, Melbourne Place, Strand, London, W.C.2. Closing date for applications is September 15.

### Chemist-Contractors

#### LEICESTER'S RESIGNATION RATE WORRY

THE problem of an unusual number of resignations from Leicester Executive Council's list of chemist-contractors was discussed at a meeting of the management committee of the Executive Councils' Association in London recently. The Leicester Executive Council had informed the committee of its concern with the effect of that trend. The management committee decided to request the observations of the National Pharmaceutical Union on the position in Leicester. A letter from West Sussex Executive Council containing its decision "that it be represented to the Ministry of Health that hypodermic syringes up to 5 mils should be made available for supply under the Service," was referred to the British Medical Association for observations and such action as might be considered necessary. The committee was urged by Blackburn Executive Council to press the Minister of Health to establish minimum standards for equipment and type of premises to be used in providing appliances. The committee decided that the small number of cases giving cause for complaint did not justify an amendment to the regulations.

### Industrial Accidents

#### "ACTION" CALL IN NATIONAL REPORT

A RECENTLY published report of the industrial safety subcommittee of the National Joint Advisory Council, Ministry of Labour, gives the number of days lost to industry because of injuries to workers as little short of 20 million man-days annually. Every day about



VISIT TO FERMENTATION PLANT: Pharmacists from east and north-east Scotland photographed with members of the staff of Pfizer, Ltd., in the control laboratory of the company's Terramycin fermentation plant during a visit to the plant at Sandwich, Kent, on June 6. Left to right, Mr. S. W. Kipling, Miss I. E. Ingram, Messrs. J. Freeman, D. McCraw, K. B. Stewart, K. Lyne, D. Peters, J. L. Buck and D. Willis.

60,000 workers are absent through industrial injury. Only one in six accidents is caused by power-driven machinery in factories, one in eleven in other workplaces. Most accidents arise from "ordinary everyday" causes, such as handling goods, using hand-tools, or falls. In nearly all cases there is some failure of the human element. "Positive" action is necessary to prevent accidents. Safety must be accepted as an aim of industrial policy. The report is available from H.M. Stationery Office, price 1s. 6d.

## Travellers' Schools

### £35,000 DEFICIT IN THREE YEARS

AN excess of expenditure over income during 1955-56 of £14,173 was referred to by MR. L. GAMAGE (president) at the annual court of governors of the Royal Commercial Travellers' Schools on June 18. The total deficit in the last three years was "well over £35,000." He emphasised the need for more financial support from voluntary sources if the Board was to carry out its commitments. Mr. Gamage was re-elected President, and Mr. Gordon Hope-Morley Treasurer. The ten retiring members of the Board were re-elected. Mr. Gamage stated that Mr. A. H. Carpenter (secretary) would be retiring at the beginning of May 1957 after forty-four years with the schools.

## Birmingham Analyst

### FIFTEEN INCORRECT DRUG SAMPLES

THE report of the Birmingham analyst for the first quarter of 1956 states that of a total of 252 drugs sampled, fifteen were incorrect. The incorrect samples were: Cod-liver oil, 1; eucalyptus oil, 1; eye lotion, 1; indigestion mixture, 1; influenza mixture, 3; malt extract, 2; potassium bromide tablets, 1; ammoniated tincture of quinine, 2; sal volatile, 1; white precipitate ointment, 1; zinc and castor oil cream, 1.

## IRISH NEWS

## Health Services Board

### OXYGEN DECISION DEFERRED

THE Northern Ireland General Health Services Board deferred discussion on the oxygen service for twelve months at a recent meeting, and directed the pharmaceutical officer (Mr. A. W. Kerahan) to keep a record during that period of prescriptions for oxygen. MR. G. D. STEWART (secretary) said that prior to the introduction of the present scheme by the Ministry of Health and Local Government, there had been no official arrangement for the payment of hire charges to chemists who supplied equipment for use with oxygen ordered by doctors. DR. J. H. P. GIFF said that only a doctor could decide when the use of the equipment could be discontinued, and it was possible that, in some cases, the equipment would remain unnecessarily at the patient's home. MR. H. W. GAMBLE suggested that payments to chemists should cover delivery and collection of the apparatus, assembly, and instruction in its use. MR. STEWART suggested that it would be advisable

to wait until information was available about any difficulty chemists experienced in operating the new arrangements. The Board would require to justify any approach to the Ministry for an alteration. Reviewing dispensing by doctors, MR. STEWART said that there were 99,000 patients on the lists of seventy-eight dispensing doctors on April 1, compared with 157,000 on the lists of 128 dispensing doctors in 1949. Only six of those doctors had more than 1,000 patients. The Board decided that the staff should again review the lists of dispensing doctors and present the results to a meeting of the special committee in September. MR. STEWART said that some doctors were now prescribing Syl barrier cream, apparently on specialists' recommendations, and inquired if the medical advisory committee considered that preparation as a prescribable drug. THE MEDICAL ADVISER (Dr. J. M. Hunter) said that in some cases barrier creams apparently prevented dermatitis at work. The Board agreed that the pharmaceutical officer should be asked for information on the number of prescriptions for barrier creams.

## Examination Results

### SUCCESES IN NORTHERN IRELAND

SUCCESSFUL candidates in the Qualifying examination of the Pharmaceutical Society of Northern Ireland in June were:—Isaac J. Boal; Edward H. Casey; David H. Coffey; Fred H. Colhoun; Desmond K. Curran; Kenneth J. Dickson; George F. R. Egerton; Edith A. Gillespie; Dorothy Hall; Harold M. Hamilton; Daniel L. Kelly; Kenneth F. Kerr; Patrick S. Laverty; Helen M. Leech; Margaret E. McClelland; John C. M. McCrea; George C. A. McGowan; Dennis M. McNaney; John M. Martin; Peter J. Mulgrew; Bernard C. Murphy; Marjorie Murray; Arthur G. Newberry; Patrick I. O'Neill; Norman W. Smyth; Margaret J. Watson.

The following were successful in the Preliminary Scientific examination:—Lena F. Allen; Ernest A. Baird; James O. Beggs; Noel W. Bell; Hugh F. Casey; Roger J. O. Corrigan; Oliver P. Dolan; Ann M. Duffy; Joseph K. Fegan; Hugh P. Gabby; Dermot A. Giles; William Gilkinson; Thomas A. Gray; Leonard J. Groves; Patrick J. Heron; Richard A. Holden; Dorothy V. Jones; Phillip A. McCaffrey; Michael D. McCann; Gerard McGeogh; Patrick F. McGovern; Noel V. McGrady; John G. McIlroy; Alexander Moore; Odran J. Mulholland; Noel C. O'Sullivan; Bernard O. Rankin; Vyrus E. Reaney; Derek Robinson; Derek Ross; Margaret P. Scott; Matthew M. Slevin; Norman A. Smyth; James A. Stevenson; David S. Stewart; Raymond E. Stewart; James H. Wallace; Margaret Wellwood.

## Animal Remedies Bill

### FIRST READING IN DAIL

THE Dail has given a first reading to the Animal Remedies Bill 1956. The Bill seeks to regulate the import, manufacture, distribution, sale and advertising of animal remedies, and to provide for the charging of fees on licences.

## NEWS IN BRIEF

DR. G. A. Clark has been appointed deputy chief medical officer, Ministry of Health, effective from August 1.

THE rate of duty on madder root was reduced from 1s. 3d. per lb. to 10 per cent, *ad valorem* on June 28 under an Order published as S.I. 1956, No. 950.

THERE have been no reportable accidents at the Stone, Staffs, factory of Quickfit & Quartz, Ltd., for three and a half years.

THE National Council for Technological Awards has appointed Mr. F. R. Hornby, *Secretary*. He is taking up his duties on September 1.

CAMERAS and binoculars valued about £300 were stolen recently from the pharmacy of Mr. A. E. Pearce, M.P.S., 63 High Street, Sittingbourne, Kent.

POLICE are investigating the third break-in within a month at the premises of Boots, Ltd., 26 Upper Kirkgate, Wakefield, Yorks; goods and cash worth about £138 have been stolen.

FROM a date in 1958, to be announced later, the Board of Trade's present wholesale price index numbers will be replaced by a new series taking average prices in 1954 as 100.

HUDDERSFIELD town council approved on July 4 a health committee recommendation to adhere to its previous decision to sell welfare foods at child welfare clinics in the borough.

THE seventeenth list of amendments to Appendix A of the 1951 Report of the Departmental Committee on the Carriage of Dangerous Goods and Explosives in Ships is obtainable from H.M. Stationery Office, price fourpence.

PETERBOROUGH Executive Council's hours of service committee has decided, after considering complaints, that there is no justification for an extension of hours of chemists' evening rotas in the town.

THE staff of Meggeson & Co., Ltd., on their annual outing, visited Eastbourne on July 7. At tea, the guests were received by Mr. R. Campbell Feather (managing director) and Mrs. Feather.

WAYS in which the application of modern management techniques can secure increased productivity were discussed by delegates from thirteen countries at a conference at Deauville, France, recently. The conference was organised by the European Productivity Agency of the Organisation for European Economic Co-operation.

THE current news bulletin of the International Pharmaceutical Students' Federation reports that the financial situation of the Federation is poor. Despite letters offering membership to manufacturing companies, no financial assistance has been obtained in that way.

THE Association of British Chambers of Commerce, the British Employers' Confederation, the Federation of British Industries and the National Union of Manufacturers issued a statement on July 12, recommending industry to exercise "great restraint" in prices in an effort to defeat inflation.

A NEW British Standard for dipping thermometers for taking sample temperatures of liquids, B.S.2720, has been introduced. Copies of the Standard specification are obtainable from the British Standards Institution, 2 Park Street, London, W.1, price 2s. 6d.

THE Society of Cosmetic Chemists has elected the following officers for 1956-57:—President, Mr. R. T. Dobson; Vice-President, Mr. J. Pickthall; Treasurer, Mr. H. J. Lovell; Secretary, Mr. F. Riley, 140 Park Lane, London, W.1.

To help local health authorities to emphasise to parents the need to have their babies vaccinated against smallpox, the Ministry of Health is distributing a small poster. Vaccination of children under one year during 1955 was 36·4 per cent. of the live births during the twelve months ended June, 1955.

THE council of the Royal Society has awarded the Tropical Research Fellowship (Medical Sciences) to Dr. D. G. Jamison, Corpus Christi College, Oxford, for his work on the histopathology of leprosy with particular reference to the relationship of the mycobacteria to cutaneous nerve fibres.

WOLVERHAMPTON Executive Council agreed at its annual meeting on June 27 that one of its members should write informally to the Staffordshire Executive Council asking them to bear in mind the needs of "overspill" families from Wolverhampton "who now have to walk long distances to fetch medicine."

THE Register of Chiropodists and the Register of Orthoptists for 1956 have recently been published; copies are obtainable from the Registrar, Board of Registration of Medical Auxiliaries, British Medical Association House, Tavistock Square, London, W.C.1, price 10s. and 5s. respectively (free to medical practitioners, hospitals and other employing authorities).

THE annual staff outing of Morny, Ltd., was held on June 16, Mr. R. B. Jackson (chairman) presiding; directors present included Messrs. Dutby-James, D. N. C. Steedman, F. J. Pettitt, and G. Leslie Wates, and a special welcome was extended to Mr. John L. Taylor (a director, Middows Bros., & Taylor, Ltd., the company's New Zealand agents).

## SPORT

**Golf.**—LONDON CHEMISTS' GOLFING SOCIETY at West Surrey golf club, Godalming, on July 15. *Medal competition and Morny prize:* 1, G. T. Morson (12), 73; 2, V. F. E. Simmons (16), 75; 3, R. H. Davies (11), 77. *Stableford competition and Johnsons of Hendon prize:* 1, V. F. E. Simmons (16), 30; 2, G. T. Morson (12), 32; 3, B. F. Tisdall (10), 30.

LEEDS CHEMISTS' GOLF ASSOCIATION, annual competition for Crookes trophy, at Wetherby, recently. *Winner:*, R. W. Bell (17), 68.

MANCHESTER PHARMACEUTICAL GOLFING SOCIETY at Pleasington golf club, on July 4. Hosts were Hough, Hoseason & Co., Ltd. *Hough Hoseason trophy:* 1, H. Oldham, 71.

## LOCAL OFFICERS

### PHARMACEUTICAL SOCIETY

Harrogate Branch.—Chairman, Miss M. M. Falcon; Vice-chairman, Mr. T. Moffat; Treasurer, Miss O. Windemer; Secretary, Mr. R. W. Jackson, 54 Harlow Crescent, Harrogate.

## TOPICAL REFLECTIONS

By Xrayser

### Practical Training and Trainees

The news that the Executive of the National Pharmaceutical Union has authorised a special committee to prepare a scheme of apprenticeship training, designed to help the employer in the carrying out of his obligations, is of general interest (p. 29). It is evident that the N.P.U. is concerned about the disproportionate number of apprentices who are being drawn into the net of company pharmacy and is making an effort to redress the balance. It is not an easy task. While the N.P.U. is trying to enlist the interest of the private pharmacist and attempting to persuade him to train apprentices, the companies are advertising the advantages of enlisting with them. Those advantages include a prospect of a career in good conditions, with security and continuity in an expanding and ambitious organisation. The only brake on rapid expansion is the shortage of pharmacists, and the logical and inevitable outcome of such shortage is a determined effort on the part of the companies to direct the major flow of recruits into pharmacy into their channels at the earliest possible moment. The trend has been evident for many years, and the N.P.U. is very naturally concerned. The future survival of private pharmacy depends on continuity of succession, and unless individual proprietors are prepared to take some hand in the training of the future pharmacist, they may find he has other irons in the fire when they want his mature services. Anything, then, which can be done to revive the interest—the enlightened self-interest it may well be called—of the individual proprietor pharmacist is commendable.

### Changing Designations

An American industrialist, when questioned recently on the subject of unemployment and possible slump in the United States, looked pained as though offered an uncoated pill or tablet. He explained that there were no signs of what he called a recession, but that there might conceivably be a danger of a sidewise recession, whatever that might have been. In like manner, we are gradually becoming accustomed to speaking of practical training instead of apprenticeship, while the apprentice has become a trainee, though there may be a subtle difference which depends on the stage at which the tuition is undergone. But side by side with changing designations are changing circumstances. If the proposals of the advisory committee on education are accepted by the Pharmaceutical Society's Council in regard to entrance into pharmacy, the point of entrance will be at the present Intermediate level, and registration as a student will take place at that stage. No apprenticeship or practical training will be recognised before registration has been effected, by which time the student will have been in the majority of cases attending a recognised course of instruction. Opinions vary as to the time at which the practical training should be taken, but the new proposals appear to weight the scales still more heavily in favour of a continuous academic course with post-academic practical training. Whether the prospective apprentice-master (or, perhaps, trainer is now the correct word in the new vocabulary, despite the football and racing parallel) would regard the task as too difficult in such circumstances, remains to be seen. Once the old guard, with its preferences, prejudices and peculiarities has gone, all obstacles may disappear automatically.

### Veratrum

The renewed interest in veratrum would contribute to the success of the Pharmaceutical Society's exhibition held in conjunction with the annual meeting of the British Medical Association at Brighton. The name of Dr. J. M. Rowson would ensure its authenticity and interest. A hundred years ago veratrum was viewed with circumspection as a drug with somewhat violent properties. Indeed, the writer of a family herbal stated: "We had a tincture of it in our dispensatory, drawn with proof spirit, which proved a violent emetic and cathartic, taken from half to two drachms; it was sometimes used as an alternative, the length of a few drops; but it has been thrown out, having never been used of late on account of its virulence." Veratrum was used in powder form in the treatment of epilepsy and mania.

## COMPANY NEWS

Previous year's figures in parentheses

**IMPERIAL CHEMICAL (PHARMACEUTICALS), LTD.**—Mr. E. D. Carey (commercial director) has been appointed managing director; Mr. W. H. Grice (general sales manager), becomes commercial director. Also appointed to the board are Drs. L. B. Wevill and J. Y. Bogue.

**DUFAY, LTD.**—A consolidated trading loss of £122,288 was incurred in the year ended September 30, 1955 (against a previous deficit of £6,057). After providing £60,000 (nil) for possible losses on stock realisations, £22,535 (£20,936) for depreciation and after directors' and auditors' emoluments. Charges of £2,715 (credit £8,837) relating to previous years, less a credit balance of £4,894 (£2,114) brought in, leaves a debit of £120,109 to carry forward. Commander R. H. Bristow (chairman) explains that the new board decided that owing to finance needed and risks involved, the manufacture of x-ray film must be discontinued. Trading in x-ray films continues and arrangements have been made whereby the company's products are available for export markets.

**ALBRIGHT & WILSON, LTD.**—The company announce the signing of a preliminary letter of intent which sets out the basis of negotiations for a proposed amalgamation of their American subsidiary, Oldbury Electro-Chemical Co., Niagara Falls, N.Y., with Hooker Electrochemical Company, also of Niagara Falls. Hooker Electrochemical Co. is a large American company, established in 1903, and engaged in the manufacture of a wide range of chemical products. Oldbury Electro-Chemical Co. was founded by Albright & Wilson, Ltd. in 1896 and was the first company to manufacture phosphorus in the U.S. on a commercial scale and is one of the main producers of sodium chloride. It is proposed that Hooker Electrochemical Co. which at present has on issue 6,006,946 Common shares of \$5 each will allot a further 450,000 Common shares in exchange for the entire capital of Oldbury Electro-Chemical Co., consisting of 10,000 shares of \$100 each. Albright & Wilson, Ltd., hold 8,400 of these shares which appear in their books at the par value of \$840,000, and were represented in the 1955 consolidated accounts by net assets of \$6,960,000. Based on the present market price of Hooker Electrochemical Co. shares the value of the holding to be received by Albright & Wilson, Ltd., is \$18,522,000. The transaction in no way affects its Canadian subsidiary, the company adds.

### New Companies

**HARRY FORMAN (CHEMISTS), LTD. (P.C.)**—Capital £1,000. To carry on the business of wholesale and retail chemists and druggists, etc. Director: Harry Forman, M.P.S. R.O.: 3 Paton Street, Manchester, 1.

**KENTON LABORATORIES (SALES), LTD. (P.C.)**—Capital £100. Directors: John K. Cooper (director, Kenton Laboratories, Ltd.), Edwin W. Chick (director, Ellis & Co. (Cutlery Sales), Ltd.), and Simon S. Darvas. R.O.: 9 Marble Arch, London, W.1.

## IN PARLIAMENT

BY A MEMBER OF THE PRESS GALLERY, HOUSE OF COMMONS

IN the House of Lords on July 12, LORD DOVERCOURT moved an amendment to Clause 24 of the Restrictive Trade Practices Bill to allow an agreement providing for giving information to one of the parties to it or at his request financial or legal assistance for the purpose of enabling him to enforce such a condition as is referred to in subsection I of Section 24. Lord Dovercourt said that the amendment had not been selected in the House of Commons because the Parliamentary Secretary to the Board of Trade had written to Mr. I. J. Pitman saying that the amendment was unnecessary because trade associations would be at liberty to assist manufacturers to use legal facilities for the enforcement of resale prices, subject to the law relating to maintenance. THE LORD CHANCELLOR said that such agreements would not be registrable and the amendment was unnecessary and to include it might throw doubt on the meaning of Clause 6. Agreements of the kind would be registrable if the promise of assistance were conditional upon or the amount of assistance depended upon, agreement between the suppliers to maintain their resale prices. He could not accept the amendment and hoped that it would be

clear that trade associations would be able to assist individual manufacturers to enforce their resale price conditions without incurring any liability to registration under Part I of the Bill and provided, first, that there was no undertaking expressed or implied, by the manufacturers to enforce their prices. And secondly, that such assistance was permissible under the ordinary law of maintenance. The amendment was withdrawn. LORD MANCROFT moved an amendment to remove the provision in the Bill that the Act should come into force one month after the date on which it was passed. It would therefore come into force immediately on enactment except that Part II of the Bill would not come into force until two months after the passing of the Act.

### Doctors' Remuneration Claim

MR. R. H. TURTON (Minister of Health) told LIEUTENANT-COLONEL M. LIPTON on July 16 that the claim for increased remuneration made by the British Medical Association on behalf of doctors under the National Health Service had been rejected on the grounds that consideration could not be justified in present circumstances.

## GERMAN CHEMICAL FIRM'S PROGRESS

### Farbenfabriken Bayer, A.G., on 1955 trading

THE report for 1955 presented by the board of Farbenfabriken Bayer, A.G., Leverkusen, Germany, recently, states that the group's turnover reached DM 1,437 millions, equivalent to a 19 per cent. rise since 1954. Its share in the turnover of Western Germany's chemical industry as a whole amounted to more than 10 per cent.

Sales on the home market rose by 17 per cent. and exports by 22 per cent., reaching DM 546 millions, or 38 per cent. of the total turnover. The ratio of export sales was double the proportion attained by the West German chemical industry as a whole. Although the export business in general had become steadier, the share of exports taken by industrial countries varied considerably both for political reasons and on account of foreign exchange difficulties. Europe once again took the lead with 57·4 per cent. of total exports. All branches of the concern contributed to the increase in turnover achieved during the year.

In chemicals, turnover rose by 19 per cent. compared with 1954; prices remained stable on the home market and dropped slightly abroad as a result of stronger competition. About one-third of the turnover went to export. The output of inorganic chemicals fell short of meeting requirements, and had to be supplemented by imports. Although dyestuffs rose during the year, the increase fell short of the average advance in turnover as a whole, which was achieved in 1955.

The value of pharmaceuticals fell short of that of 1954, although the upward trend on the home market continued. The export ratio amounted to 37 per cent. The company has suc-

ceeded in recovering its trade marks and plants in certain of the larger Latin American countries, and the sales position in that region looks promising.

The turnover in plant protection agents rose by an average of one-third during the year.

The company's capital was raised by DM 162·3 millions to DM 550 millions on January 1, 1956. Net profits for the year totalled DM 34·9 millions. A dividend of 9 per cent. was approved.

The group's labour force numbered 44,831 at the end of the year (against 40,596 the year previously). The Leverkusen plant took the major share with 2,618 people, and raised its total to 27,513.

Capital expenditure of the group totalled DM 236·4 millions as against depreciation for the year amounting to DM 134·3 millions.

Besides investments in the company's own plants and in its subsidiaries, a further appropriation of DM 57 millions was devoted to the expansion of its holdings inside and outside Germany.

Under its research programme the report mentions that new laboratories were erected to accommodate the growing number of scientific personnel.

The extension of laboratory buildings cost DM 17·7 millions. Expenditure on research as a whole rose to DM 62 millions during the year. About 37 per cent. of the 1955 turnover consisted of products not manufactured in the company's plants before 1948.

The first few months of the current year showed an appreciable increase in turnover compared with the corresponding period in 1955.

## LEGAL REPORTS

### Prison for Embezzlement

THE former manager of the Kirkwall, Orkney, branch of Boots, Ltd., Alexander Shearer, Kirkwall, was sentenced to six month's imprisonment at Kirkwall sheriff court after pleading guilty to having embezzled £153 from his employers between May 7 and 10. Shearer was stated to have joined the company's staff in 1939. When he went to Orkney in 1954 his pay was £17 12s. a week, but it had risen to £24 a week at the time of the embezzlement. For Shearer it was stated that he had had no holidays since 1954, and had been working under considerable strain. An offer to reimburse the company had been refused, but the company had indicated that it would be willing to give him another job when the law had taken its course.

### Drug Stocks by Prescriptions

AT Kilmarnock sheriff court, recently, Dr. A. H. F. Arnott, 8 Arran Place, Ardrossan, was fined £25 after pleading guilty to a charge of presenting prescriptions to chemists in the names of patients and obtaining morphine sulphate tablets. It was stated that, on occasions between November 1955 and April 1956, Dr. Arnott sent a man, and on one occasion went himself, to a chemist to have prescriptions made up. He had used the names of seven different persons to obtain the drugs. He was the only doctor in the area who did not keep Dangerous Drugs in stock, although, as a medical practitioner, he was entitled to be in possession of them. The fiscal said he did not know what the doctor did with the drugs. There was no suggestion that he used them personally. An agent for the accused said that Dr. Arnott had taken to that method of obtaining drugs to avoid maintaining his own register of drugs used in the course of his practice. He had been faced with a great deal of work with forms. The sheriff-substitute pointed out that the penalties for that type of offence were heavy: the maximum fine was £200.

### PERSONALITIES

MR. T. A. TAYLOR, M.P.S., Camberley, Surrey, has resigned from Camberley urban council because of recurrent eye trouble.



Dr. H. Davis (chief pharmacist, Ministry of Health) photographed with his wife and daughter at the garden party held by the Queen at Buckingham Palace on July 12.

MR. F. AINSCOKE, M.P.S., Swinton, Manchester, has been appointed president of Swinton and Pendlebury Rotary Club.

MR. C. E. RATCLIFFE, B.Pharm., F.P.S., son of Mr. E. Ratcliffe, M.P.S., Wembley, has been admitted to the livery of the Worshipful Company of Needlemakers. He is on the technical staff of Parke, Davis & Co., Ltd., Hounslow.

MR. DAVID TRAIN, M.C., B.Pharm., B.Sc.(Eng.), A.C.G.I., D.I.C., F.P.S., A.R.I.C., has had conferred upon him the degree of Ph.D. in the faculty of engineering (chemical engineering) in the University of London. The title of his thesis was "An Investigation into Some Aspects of the Mechanism of Pelleting." Dr. Train is a lecturer in the department of pharmaceuticals at the School of Pharmacy, University of London.

### DEATHS

CARISS. — Recently, Mr. William Cariss, M.P.S., Rose Lea, West Green, Stokesley, Yorks. Mr. Cariss qualified in 1894.

HILL.—On July 10, Mr. Wilson Hill, M.P.S., Stringers Hall, Petworth, Sussex, aged seventy-five.

SHAW.—On July 11, Mr. Seth Shaw, M.P.S., 299 Stretford Road, Hulme, Manchester, aged sixty.

WOODHOUSE. — On July 2, Mr. Wildish Moreton Woodhouse, M.P.S., 26 College Road, Cheltenham, Glos., aged seventy-seven.

## BUSINESS CHANGES

CARR, GODDEN & Co., have removed to 206 Bishopsgate, London, E.C.2.

THE title of Chappie, Ltd., Melton Mowbray, Leics, is being changed to Petfoods, Ltd., on August 1.

WINSTON ELECTRONICS, LTD., Govett Avenue, Shepperton, Middlesex, have changed their telephone number to Walton-on-Thames 6321.

L. LIGHT & CO., LTD., Poyle Trading Estate, Colnbrook, Bucks, have installed the Telex system (No. 12-203). The telegraphic address is now Light, Colnbrook, Telex.

### Appointments

THE ARTHOL MANUFACTURING CO., LTD., Sealand Road, Chester, have appointed Mr. H. E. Marsac their representative in the London area.

MORNY, LTD., 22 Wadsworth Road, Perivale, Middlesex, have appointed Mr. G. C. Carter their representative for Wiltshire, Gloucestershire, Somerset, Dorset, Devon and Cornwall.

BORAX CONSOLIDATED, LTD., Carlisle Place, London, S.W.1, announce the following appointments:—Mr. N. C. Pearson, assistant managing director; Mr. C. M. Houlton, general sales manager; Mr. A. G. H. Bell, assistant sales manager.

## PROPRIETARY ARTICLES TRADE ASSOCIATION

### Quarterly meeting of council

THE quarterly meeting of the council of the Proprietary Articles Trade Association was held in London on July 12, the president (Mr. N. Dewey) in the chair. THE PRESIDENT welcomed Major G. A. Rickards, nominated by Barclay & Sons, Ltd. to be their representative on the council. Mr. Dewey reminded the council that at an earlier meeting it had been decided to present Colonel S. Watson with an illuminated address expressing appreciation of their former colleague's long service. The address had been prepared and to it members had appended their signatures. It had been hoped to make the presentation at that meeting but, owing to indifferent health, Colonel Watson could not attend. Mr. Dewey had visited Colonel Watson's home and had there made the presentation on behalf of the council. Colonel Watson had written expressing appreciation of the address.

The council considered a report on action taken in connection with the Restrictive Trade Practices Bill since April and thanked Lord Dovercourt for his interest in their affairs by tabling in the House of Lords an amendment to section 24 (see p. 52). The text of the council's statement, setting out the rôle of the Association when the Restrictive Trade Practices Act comes into force was unanimously approved (see p. 49). The council decided that publication of the Year Book and List should be postponed until the beginning of 1957.

The council accepted an invitation for its representatives to meet representatives of the marketing policy com-

mittee of the National Pharmaceutical Union, it being understood that the joint discussion would be of an exploratory nature. The council were informed by the Association of British Pharmaceutical Industry that agreement had been reached with the British Medical Association on increased discount on medical specialities supplied to N.H.S. dispensing doctors. The A.B.P.I. recommended its manufacturer and wholesale members to allow a discount of 20 per cent. on such transactions.

The secretary stated in his report that during the past quarter there had been some increase in the number of cutting cases investigated by the Association. During the quarter, 450 calls and 322 test purchases had been made.

At the luncheon preceding the council meeting the secretaries of the Pharmaceutical Society (Mr. F. W. Adams and Sir Hugh Linstead), were the guests of THE PRESIDENT, who said that in their respective spheres both Sir Hugh and Mr. Adams had shown their appreciation of, and had rendered assistance to, the P.A.T.A. Replying, SIR HUGH said that anything he had been able to do for the P.A.T.A. had been a pleasure. So long as the personal relationship on the council between retailers, manufacturers and wholesalers continued, by adapting its machinery to the changed conditions, the P.A.T.A. would still be able to carry on the job it had been doing for sixty years. Mr. Adams said that so far as the Association's future was concerned there was, he thought, reasonable grounds for optimism.

## TRADE

**Shop Fitting.**—Standard shop-fitting units and free layout designs are obtainable from Salesmaster Shopfittings, Bermuda Road, Moreton, Ches.

**Brighton Medical Exhibition.**—Rova-mycin is a product of Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, Essex, and not as stated in our report of the British Medical Association exhibition at Brighton.

**Wrapping Paper Discounts.**—MacDonald & Son, Ltd., Portland Mill, Ashton-under-Lyne, are offering 5 per cent. discount on quantity orders for counter rolls, sheet wrapping paper and dispensing parchment.

**Training in Pharmacy.**—Intending entrants to pharmacy should have their attention drawn by pharmacists to the announcements in this issue by Bournemouth Municipal College of Technology and Commerce; Bradford Technical College; Brighton Technical College; Bristol College of Technology; Dundee Technical College; Chelsea Polytechnic, London, School of Pharmacy; Heriot-Watt College, Edinburgh; Leicester College of Technology and Commerce; London University School of Pharmacy; Rotherham Technical College; Sunderland Technical College; Welsh College of Pharmacy.

**Fish Kept Fresh with Antibiotic.**—Results of experiments by five Japanese scientists who used the antibiotic Acronize to keep fish fresh were presented recently to a meeting of World Fisheries Scientists in Rotterdam, Holland. The combined dipping of the fish in Acronize and storage in Acronize ice on the boat gave a storage life about fourteen times longer than normal. Some of the fish tested (yellow croaker) were found to deteriorate quickly in normal conditions but when treated with Acronize remained in good condition even after thirteen days' storage. It is pointed out that the use of antibiotics to keep fish fresh is important since it ordinarily takes, in Japan, several weeks to land a catch and get it to market.

**Change of Pack.**—A new pack for Dorothy Gray "pore grains" is here shown. It has a plastic air-proof and



moisture-proof twist pourer cap. The manufacturers are Dorothy Gray, Ltd., 565 Kingston Road, London, S.W.20.

**Guide Dogs for the Blind Scheme.**—A national campaign aimed at raising

## NOTES

£10,000 for the Guide Dogs for the Blind Association is being launched by Chappie, Ltd., Melton Mowbray, on August 21. For each label collected from the company's product Meet, Messrs. Chappie are paying the Association a halfpenny for every "handy" size label and a penny for every "double-economy" size label. The public are being asked — through a national advertising campaign and special point-of-sale material — to save the labels and hand them to the shopkeeper. Labels are being collected from shops by representatives of the company, and they will issue a receipt for the number collected. A duplicate receipt will be sent to the headquarters of the Guide Dogs for the Blind Association. Where a representative does not usually call stockists are being provided with a prepaid envelope for the labels.

**Books for Pharmacy Students.**—Textbooks published for pharmaceutical students by BAILLIÈRE, TINDALL & COX, 7 Henrietta Street, London, W.1, include Bentley's "Textbook of Pharmacology," Trease's "Textbook of Pharmacognosy"; Barber's "Physiology and Pharmacology for Pharmaceutical Students"; Mangham and Hockley's "Biology for Pharmaceutical Students"; Herbert and Ellery's "Textbook of

Practical Pharmacognosy"; and in the students' "aids" series: "Dispensing" (just published); "Inorganic Chemistry"; "Qualitative Pharmaceutical Analysis"; "Pharmaceutical Latin"; "Pharmaceutical Calculations"; "Pharmaceutical Chemistry"; "Forensic Pharmacy"; "Analysis of Food and Drugs"; "Physical Chemistry"; "Organic Chemistry"; "Zoology"; and "Medical Treatment".—The following are among the pharmaceutical books published by PITMAN MEDICAL PUBLISHING CO., LTD. (Distributors of the medical and pharmacy lists of J. B. Lippincott Co.), 45 New Oxford Street, London, W.C.1: "Practical Pharmaceutical Chemistry"; "Dispensing for Pharmaceutical Students"; "Latin for Pharmaceutical Students"; "A Textbook of Pharmacognosy"; "Tutorial Pharmacy" (in preparation); "United States Dispensatory"; "New and Non-Official Remedies" (1956 edition); "American Drug Index"; "Textbook of Organic Medicinal and Pharmaceutical Chemistry."

### Holiday Closings

BRITISH APPLIANCES MANUFACTURING CO., LTD., Leeds, 9. Works: Friday, July 27, to Monday, August 13.

FLEXILE METAL CO., LTD., 796 Holloway Road, London, N.19. 5 p.m., Friday, July 27, to 8 a.m., Monday, August 13.

## NEW PRODUCTS AND PACKS

**Penicillin in New Pack.**—Boots Pure Drug Co., Ltd., Station Street, Nottingham, have introduced Sol-Viules penicillin G crystalline, 0.5 mega units. Pack is a slide carton containing two vials penicillin and two vials solvent.

**Hydrocortisone Ointments.**—Ef-Cortelan ointment No. 1 (non-greasy base)  $\frac{1}{2}$  per cent., and No. 2 (greasy base)  $\frac{1}{2}$  per cent., in 15-gm. tubes have been added to the range of hydrocortisone ointments marketed by Glaxo Laboratories, Ltd., Greenford, Middlesex.

**Fifty Tablets with Applicator.**—G. D. Searle & Co., Ltd., 83 Crawford Street, London, W.1, announce the introduction of a new pack of Floraquin vaginal tablets. The pack contains fifty tablets with an applicator to facilitate their correct insertion and positioning.

**New Pack for Tablets.**—Southon Laboratories, Ltd., 84 Upper Richmond Road, London, S.W.15, announce that during August a new pack is being introduced for E.P. tablets consisting of Seal-tite strips in a wallet. The tablets are available at old trade price of 11s. 8d. per doz. until September 29.

**New Lipstick Colours.**—Lancôme, 14 Grosvenor Street, London, W.1, have introduced two new lipstick colours, *rose bleu* and *rose blanc*. *Rose bleu* has "that indefinable white colour which hundreds of girls and women have been trying to achieve for over a year," and *rose blanc* is described as "the reigning snow pink princess amongst the Lancôme pinks." *Rose bleu* cream rouge and nail varnish are also available.

**Hypertension Treatment.**—Ecolid (4,5,6,7 tetrachloro-2-(2-dimethylamino-

ethyl)-isoindoline dimethochloride), a new ganglion-blocking agent for hypertension is being marketed by Ciba Laboratories, Ltd., Horsham, Sussex. The drug's duration of effect is usually eight to twelve hours. Side effects are similar to those of the other ganglion-blocking agents but with dosage adjusted to suit each patient. Ecolid is relatively well-tolerated. The product is available in bottles of twenty-five, 100 and 500 tablets each containing 25 mgm. or 50 mgm. of the drug.

**In Metric Measure.**—Bulk dispensing packs of certain medical products of The British Drug Houses, Ltd., Graham Street, London, N.1, which have hitherto been supplied in imperial measure are in future being supplied in metric measure. Revisions have been made in the range of packings available and also in their prices (see p. 80).

**Low Lactose Synthetic Milk Powder.**—A special low lactose synthetic milk powder to replace milk in the dietary treatment of congenital galactosaemia has been developed by Trurofud, Ltd., Wrenbury, Ches. Marketed as Galactomin, the food, reconstituted in the normal 12½ per cent. solution, has a maximum lactose content of 22.8 mgm. per pint. A 1:8 solution in water produces a palatable milk with approximately the same percentage composition in protein, fat, carbohydrate and mineral salts as human milk. Lactose is replaced by dextrin, maltose and dextrose which form the carbohydrate content. Galactomin is packed in 14-oz. and 3-lb. tins. In cases where there is a medical need for lactose restriction the product is prescribable on EC10 forms under the National Health Service.

# FORCES MEDICAL SERVICES COMMITTEE REPORT

## Pharmaceutical Society's plan for pharmacy rejected

**REJECTION** of the Pharmaceutical Society's suggestion of a separate pharmaceutical branch in each of the three Armed Services; and a suggested possible new Service classification of "pharmacist" are features of the second report of the Forces Medical and Dental Services Committee published on July 16.

The report deals with ancillary staffs of the medical services in the Forces.

The Committee states that the Pharmaceutical Society of Great Britain had suggested to it that a separate pharmaceutical branch should be established in each of the three Services under the supervision of commissioned officers directly responsible to the medical director-general. That organisation would be responsible for the purchase, storage, shipment, issue and dispensing of all drugs and medical stores and appliances

ranks as dispensers. Airmen in the medical trade group of the Air Force and medical technical branch officers were employed on the same range of duties as similar staff in the Army. The table below shows the establishment and strength of "dispenser-pharmacists" in each of the three Services. The normal ceiling for pharmacists in the Army was staff-sergeant. Men in such "trades" could secure worth-while promotion only by abandoning their specialised technical work for general duties. In the Air Force trade skill and proficiency entitled a man to promotion irrespective of the existence of vacancies and that enabled specialised and technical staff to remain throughout their career employed on the duties for which they had been trained, without detriment to their prospects. Chief technicians could attain commissioned rank as medical

motion by time to corporal technician, senior technician and chief technician; and a promotion outlet to master technician for pharmacists, ophthalmic opticians and physiotherapists.

In the Navy, promotion prospects for specialised and technical staffs should be improved on the lines recommended for the Army and Air Force.

In all Services, regulars who have obtained civilian qualification after training in the Services should enter the promotion ladder at the appropriate point.

All three Services should grant commissions to selected members of specialised and technical staffs on an establishment basis and at age thirty to thirty-five.

The Committee state that their one primary object was to provide for the Services, nursing, specialised and technical staffs who were well trained, properly qualified, satisfied with their conditions of service, and suitably organised for war as well as for peace.

The Committee suggests that there is need to assess in advance the number of technically qualified men and women likely to be required by the Forces in the medical field, to plan the methods of earmarking them in peace time, and of calling them up in war, to determine in advance the ranks and status to be accorded to those called up, and to deal with other organisational questions. It suggests that the Service Departments and the Ministry of Health should be asked to set up the required machinery in co-operation with the civilian organisations concerned.

In its first report the Committee recommended that a new body should be responsible for securing greater co-operation between the medical branches of the three Services and between those branches and the National Health Service. In its present report, the Committee suggests that that body should also be concerned with co-operation between the Service authorities and the civilian bodies responsible for establishing and maintaining recognised standards of skill for specialised and technical staff in the medical field.

The report is obtainable from H.M. Stationery Office, price 2s.

## INQUEST

**Suicide with Ammonia.**—At an Accrington inquest recently, a police surgeon stated that Mrs. Hannah Garlick, aged sixty-five, Newton Street, Clitheroe, had continued to drink ammonia though the first taste must have caused her considerable pain; he said she had taken many fatal doses. The woman's husband said that his wife's health was not good. On June 25 he heard her screaming. She said something about drinking ammonia and he went with her to hospital. A doctor said that Mrs. Garlick had received electrical treatment and had seen psychiatrists. "She sometimes got depressed and confused—so confused that she would not appreciate the seriousness of what she was doing." A verdict that Mrs. Garlick killed herself was returned.

### DISPENSER-PHARMACISTS

	Establishment	Strength				Total
		Regular	National Service	W.R.A.F.	Civilian	
Navy ... ...	34	—	—	—	19	19
Army ... ...	211	154	230	—	—	384
Air Force ... ...	77	56	32	1	—	89

required in the Forces' medical establishments. The Committee was "far from convinced" that the existing arrangements for the supply and distribution of medical stores required so radical and expensive a change. It did, however, feel that there should be a more extended use of qualified pharmacists in the Army and Air Force, preferably on the lines adopted by the Navy, and that greater recognition should be accorded to their skill and attainments. The Army and Air Force did not distinguish between "tradesmen" qualified as pharmacists and those who were qualified only as dispensers. The Committee considered that the Services should make a distinction between the standards of training required for dispensers and for pharmacists respectively. It was hoped that the Pharmaceutical Society would recognise the training given, and experience gained, in the Services in considering applications for admission to the Society's membership. The Committee regretted that agreement had not been reached between the Service authorities and the Society on that subject, and urged that fresh efforts should be made to that end. If, however, agreement could not be reached, the Committee thought that a new Service classification of "pharmacist" would have to be introduced.

### Present Organisation

Before outlining the present organisation of the ancillary medical services in the Forces, the report describes as "regrettable," the failure by Service trades [including pharmacy] to keep abreast of outside practice. The Navy employed civilian pharmacists on terms similar to those applicable in the National Health Service. The R.A.M.C. employed other

technical officers at about age thirty-five and that too, without leaving their trades.

The Committee concluded that unless promotion prospects in all three Services were improved there was little expectation of inducing qualified men and women to enlist on regular engagements, or of persuading serving regulars to undertake the long courses of training in the Service which were necessary to achieve full proficiency in the "trade." The Committee regards it as essential to provide a full career, up to warrant and commissioned rank, for fully qualified men and women within their respective "trades."

The system of Service training should be revised so as to provide that the staff concerned could and normally did, obtain the appropriate civil qualification at the end of their training and no man or woman should be recognised as "qualified" by the Services until the appropriate civilian qualification had been obtained. Men and women under training or who had Service qualifications only, should be called "assistants" and should normally be employed under the supervision of fully qualified staff.

The following recommendations are made for improving conditions of service of "tradesmen" and "trades-women" in the medical trade groups of the Forces:

In the Army there should be promotion by time to corporal and sergeant, and opportunities for further advancement to staff sergeant within six years, and warrant officer II within nine years. Pharmacists, physiotherapists and ophthalmic opticians should be re-classified in the highest trade group ("X"). [At present they are in the second highest group.]

In the Air Force, there should be pro-

# DUBLIN CONFERENCE PAPERS

## Details of contributions to science and professional sessions

THE following papers are being presented at the ninety-third meeting of the British Pharmaceutical Conference, Dublin, September 3-7.

### Monday morning, September 3

#### OPENING SESSION

Address. "BIOCHEMICAL PRINCIPLES IN PHARMACY. ENZYMOLOGY: CHEMOTHERAPY: DISINFECTION: DEHYDRATION AND LIFE PROCESSES: CELL ARCHITECTURE." Professor Kenneth Bullock (chairman of the Conference).

### Monday afternoon, September 3

#### SCIENCE SESSION

1. RESISTANCE OF CRYSTALLINE SUBSTANCES TO GAS STERILISATION. C. F. Abbott, J. Cockton and W. Jones.

2. THE REPRODUCIBILITY OF EXTINCTION TIME ESTIMATES. PART III. STUDIES OF SUSPENSIONS OF TEST ORGANISMS. A. M. Cook, K. J. Steel and B. A. Wills.

3. AN EXAMINATION OF RUBBER USED AS A CLOSURE FOR CONTAINERS OF INJECTABLE SOLUTIONS. PART II. THE ABSORPTION OF CHLOROCRESOL. PART III. THE EFFECT OF THE CHEMICAL COMPOSITION OF THE RUBBER MIX ON PHENOL AND CHLOROCRESOL ABSORPTION. W. T. Wing.

4. AN INVESTIGATION INTO THE COMPACTION OF POWDERS. D. Train.

5. THE RHEOLOGY OF OIL-IN-WATER EMULSIONS. THE EFFECT OF CONCENTRATION OF CONSTITUENTS ON EMULSION CONSISTENCY. Arnold Axon.

6. NON-IONIC SURFACE-ACTIVE AGENTS. PART I. THE SOLUBILITY OF CHLOROXYLENOL IN AQUEOUS SOLUTIONS OF POLYETHYLENE GLYCOL 1,000 MONOCETYL ETHER. B. A. Mulley and A. D. Metcalf.

### Tuesday morning, September 4

#### SCIENCE SESSION

7. THE CHEMICAL ASSAY OF CASCARA. A. A. J. Fluck, W. Mitchell and S. A. Wood.

8. A SOURCE OF ERROR IN THE ASSAY OF STRYCHNINE SALTS AND PREPARATIONS CONTAINING STRYCHNINE. A. C. Caws and G. E. Foster.

9. STRUCTURAL REQUIREMENTS FOR ANALGESIC ACTIVITY IN ALKYOXY-1-PHENYLETHYLAMINES AND SOME VIEWS ON ANALGESIC MECHANISM. A. McCoubrey.

10. ANALGESICS AND THEIR ANTAGONISTS: SOME STERIC AND CHEMICAL CONSIDERATIONS. PART I. THE DISSOCIATION CONSTANTS OF SOME TERTIARY AMINES AND SYNTHETIC ANALGESICS, AND THEIR IMPLICATION IN CONSIDERATIONS OF THE CONFORMATIONS OF METHADONE TYPE COMPOUNDS. A. H. Beckett. PART II. THE INFLUENCE OF THE BASIC GROUP UPON THE PHYSICO-CHEMICAL PROPERTIES AND THE DEGREE OF ACTIVITY IN METHADONE AND THIAM-BUTENE-TYPE COMPOUNDS. A. H. Beckett, A. F. Casy, N. J. Harper and P. M. Phillips. PART III. THE INFLUENCE OF THE BASIC GROUP ON THE BIOLOGICAL RESPONSE. A. H. Beckett, A. F. Casy and N. J. Harper.

11. THE DETERMINATION OF RIBO-

FLAVINE IN PHARMACEUTICAL PRODUCTS. L. Brealey and D. A. Elvidge.

12. THE STABILITY OF B VITAMINS IN PHARMACEUTICAL PRODUCTS. F. Wokes and F. W. Norris.

13. THE DETERMINATION OF BENACTYZINE. J. P. Jefferies and J. I. Phillips.

#### PROFESSIONAL SESSION

PROFESSIONAL CONDUCT. F. W. Adams.

### Tuesday afternoon, September 4

#### SCIENCE SESSION

14. *Glinus oppositifolius* L. Root—A SUBSTITUTE FOR SENEGA. R. M. Ridgway and J. M. Rowson.

15. THE EVALUATION OF BELLADONNA HERB. PART I. THE QUANTITATIVE DETERMINATION OF SEED IN POWDERED HERB. R. G. Atkinson and C. Melville.

16. THE PHARMACOGNOSY OF THE *Aspidosperma* BARKS OF BRITISH GUIANA. PART IV. QUANTITATIVE NUMERICAL STUDIES OF THE LIGNIFIED ELEMENTS IN CASCARA AND IN *Aspidosperma* SPECIES. J. D. Kulkarni, J. M. Rowson and G. E. Trease.

17. THE APPLICATION OF ENZYME INHIBITION TO THE ESTIMATION OF SMALL QUANTITIES OF DRUGS POSSESSING ANTICHOLINESTERASE ACTIVITY. THE ASSAY OF INJECTION OF NEOSTIGMINE METHYLSULPHATE. J. Buckles and K. Bullock.

18. HIGH FREQUENCY TITRATIONS IN PHARMACEUTICAL ANALYSIS. J. Allen, E. T. Geddes and R. E. Stuckey.

19. A METHOD OF DETERMINING BINARY MIXTURES BY DISTRIBUTION MEASUREMENTS, AND ITS APPLICATION TO THE ASSAY OF STRYCHNINE IN THE PRESENCE OF QUININE. C. Morton and E. H. Tinley.

### Wednesday morning, September 5

#### SCIENCE SESSION

20. SUSTAINED RELEASE OF DRUGS FROM ION EXCHANGE RESINS. N. C. Chaudhry and L. Saunders.

21. THE STERILISATION, STABILITY AND TOXICITY OF CONGO RED INJECTIONS. G. F. Somers and T. D. Whittet.

22. PERCUTANEOUS ABSORPTION USING DIODOFUORESCIN  $^{131}\text{I}$ . J. W. Hadgraft, G. F. Somers and H. S. Williams.

23. THE ACTION OF ION EXCHANGE RESINS ON PYROGENS. PART I. EFFECT ON PYROGENICITY OF TAP WATER. T. D. Whittet.

### Thursday morning, September 6

#### SYMPOSIUM SESSION on "WATER."

Opening Papers, POTABLE WATER. E. Windle Taylor and N. P. Burnan. WATER FOR PHARMACEUTICAL PURPOSES. L. Saunders and E. Shotton.

### Friday morning, September 7

#### SCIENCE SESSION

24. PAPER CHROMATOGRAPHIC DETECTION OF NEW CONSTITUENTS OF *Digitalis lanata*. Barbara J. Aldrich, Margaret L. Frith and S. E. Wright.

25. STUDIES IN THE GENUS DIGITALIS. PART V. FERMENTATIVE DEGRADATION OF *D. purpurea* LEAF. J. M. Rowson and S. Simic.

26. DETERMINATION OF THE DIGITOXIN CONTENT OF *Digitalis purpurea*. E. H. B. Sellwood.

27. STUDIES IN THE REACTIONS OF ANTIBACTERIALS WITH BACTERIA. PART I. A STUDY OF TECHNIQUES AND THEIR APPLICATION TO THE INVESTIGATION OF THE REACTIONS OF NITROFURAZONE WITH *Aerobacter aerogenes*. A. H. Beckett and Ann E. Robinson.

28. ANTITUBERCULOSIS ACTIVITY IN THE PHENAZINE SERIES. ISOMERIC PIGMENTS OBTAINED BY OXIDATION OF *o*-PHENYLENEDIAMINE DERIVATIVES. V. C. Barry, M. L. Conalty and Ethna E. Gaffney.

29. THE CHEMISTRY OF SANTONIN. PART II. PREPARATION OF SOME DERIVATIVES WITH POSSIBLE ANTHELMINTIC ACTIVITY. W. Cocker and T. B. H. McMurry.

#### PROFESSIONAL SESSION

DEVELOPMENTS AFFECTING PHARMACEUTICAL PRACTICE—THE PROBLEM OF KEEPING UP-TO-DATE. H. W. Tomski.

### Friday afternoon, September 7

#### SCIENCE SESSION

30. SOME STATISTICAL ASPECTS OF THE ANALYTICAL CONTROL AND STANDARDISATION OF TABLETS. A. R. Rogers.

31. STUDIES ON *Leontice leontopetalum* LINN. PART I. INTRODUCTION. THE ISOLATION OF THE CHEMICAL CONSTITUENTS OF *Leontice leontopetalum* AND SOME PRELIMINARY OBSERVATIONS ON THE PHARMACOLOGICAL ACTION OF LEONTICINE AND PETALINE CHLORIDE. J. McShefferty, P. F. Nelson, J. L. Paterson, J. B. Stenlake and J. P. Todd.

32. STUDIES ON *Leontice leontopetalum* LINN. PART II. HISTORY, SOURCES AND MACROSCOPICAL CHARACTERS OF THE PLANT *L. leontopetalum*. P. F. Nelson and F. Fish.

Galley proofs of the chairman's address and of the papers to be presented at the symposium and professional sessions will be available during the week beginning July 23. Galley proofs of the science papers will be available in the usual way before the Conference.

Members, including Branch representatives, attending the Conference, and who would like to receive copies of the papers should write, not later than August 18, to the secretaries, 17 Bloomsbury Square, London, W.C.I., stating the papers required.

## N.H.S. STATISTICS

In HALIFAX during 1955-56, 514,818 prescriptions were dispensed at an average cost of 52·88d. each. There were thirty-four chemist-contractors. Nineteen test prescriptions were dispensed (including three for appliances), one of which was referred to the Pharmaceutical services committee.

# EDUCATION POLICY OF THE SOCIETY

## Support and criticism at annual meeting of Scottish pharmacists

THE educational policy of the Pharmaceutical Society was the subject of a controversial address by Mr. C. W. Macfarlane (a member of the Scottish Department Executive and a former member of the Society's Council), at the annual meeting of members of the Society resident in Scotland, on June 13.

MR. MACFARLANE asked whether the Society's diploma was sufficient for the pharmacists of the future. Was there room for both the degree and the diploma? Of the increasing number of students taking a degree course, what was happening to those who graduated? Were they coming on to the Society's Register and if so were they entering industrial, hospital or general practice?

### Technologist, not Technician

A pharmacist must be a technologist, one who knew why and how to do his work, and not merely a technician who was only required to know how. Were men to be trained to the level where they were fully qualified and could undertake all the responsibilities of a pharmacist, or to a stage where they had the basic training, but required experience to consolidate it? Practising pharmacists knew the responsibilities they had to accept daily. Were they prepared to allow young people to assume those responsibilities unless they were assured that those young people had been adequately trained? If a person's name was on the Society's Register, that person had the right to open a pharmacy, or to be in sole charge of a pharmacy. That suggested that registration should be delayed until pharmaceutical maturity was acquired. And was the same training to be forced on all students irrespective of whether they wanted to go into industry, hospital pharmacy or retail?

The aim should be to give academic and practical training to a person with the basic scientific knowledge to enable him to go into whatever branch of pharmacy he chose.

The practising pharmacist was the best judge of the potential young pharmacist. The great majority agreed that practical training was still necessary, but there were differences of opinion as to when was the best time for it.

The correct time for practical training, said Mr. Macfarlane, was when the boy or girl left school.

Regarding the Society's entrance examination standard, in the past Scotland had always recommended University Attestation of Fitness, but one difficulty had been to achieve parity between Scotland and England and Wales because the Scottish Leaving Certificate on the higher standard was lower than the English General Certificate of Education at advanced level, but higher than that Certificate at ordinary level. Was Scotland to require University Entrance standard and let England have ordinary level subjects, thus placing the Scottish student at a disadvantage, or was the English student to take his subjects at the advanced level, thus giving the Scottish

student an advantage? To maintain the level at University Entrance standard was of tremendous advantage to the student at a later date.

Another point that required consideration was the time to be spent in training. The Scottish Executive had suggested four years after passing the Intermediate examination but without specifying whether there should be two years' academic and two years' practical training or three years' academic and one year's practical training. The interim report of the education policy subcommittee (see *C. & D.*, April 21, p. 301) proposed that the time occupied by practical training and the course of study at a school of pharmacy should be an overall period of four years, of which not less than one should be devoted to practical training. It should be noted that a period of one year's practical and three years' academic training meant that the total time would be five years, i.e. one year pre-intermediate, and four years post-intermediate.

### Rewards must be Commensurate

Recruits into pharmacy would not be obtained if the time and money spent on preparation was not commensurate with the return. The syllabus required overhauling, some subjects to be augmented, others to be pruned. The Qualifying examination itself required overhauling. A competent authority had stated that, as conducted at present, it threw an undue strain on the student.

The subcommittee's interim report stated that the policy that a student should complete his knowledge of basic sciences before commencing professional studies should be made compulsory, and that only when the student had completed that stage should he be eligible for registration as a "student." Mr. Macfarlane was completely out of sympathy with that paragraph.

The report stated that to enable a candidate to provide evidence of his knowledge of basic sciences and so become registered as a "student," the Society should continue to hold an examination in the subjects of the present Intermediate examination, the standard remaining roughly the same, but the examination being known as the Entrance examination and the present system of approving courses of instruction leading to it being discontinued. Mr. Macfarlane thought the discontinuance of recognition of schools would be fraught with danger.

If the suggestions regarding practical training made in the report were adopted, the position would be chaotic. In the past, objections had been raised to the too great choice of the stage at which practical training could be taken. In that report the choice was increased and there was introduced the absolutely unworkable idea of vacation work to be counted as part of the practical training and the overall time reduced accordingly. It was exceedingly fortunate that regulations giving effect to the subcommittee's proposals had not yet been prepared as that gave time for views to be expressed.

During the discussion that followed, Mr. C. EGGO, Stirling, said that most of the students taking a degree course entered industrial pharmacy. The future of retail pharmacy depended on the course for the diploma.

MR. H. PERKINS, Dundee, said one argument in favour of post-graduate training was the number of apprentices who did not qualify; many did not get past the Intermediate stage.

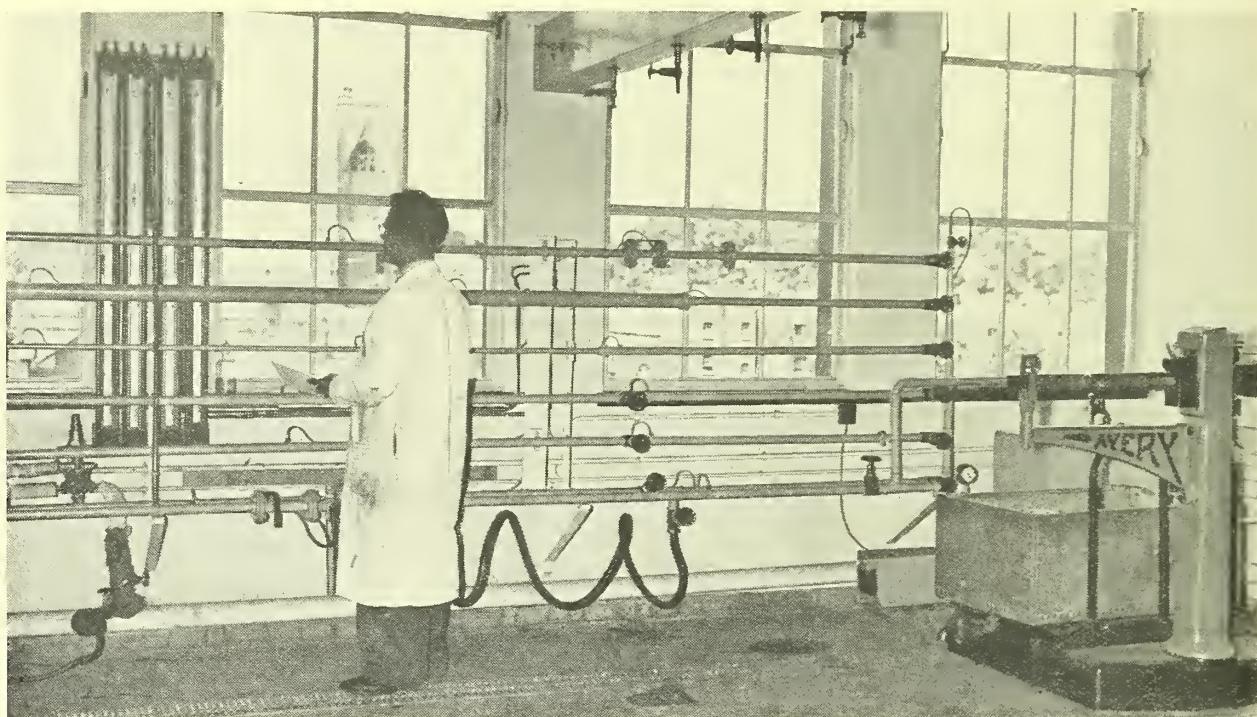
MISS E. JENKINS, Dundee, asked for assurance that the Scottish retail point of view would be kept in front of the Education Committee. DR. D. McCALL (resident secretary of the Scottish Department) said that it would be a mistake to assume that, although there was a preponderance of academic representatives on the Committee, the views of retail pharmacists would be disregarded when recommendations of the Committee came before the Council.

MR. C. G. DRUMMOND, Edinburgh, said that, in the meantime, only those on the Register of the Society were in a position to carry out certain statutory requirements. Unless the Society maintained control over the Register, it would lose its hold over the standard of education for pharmacy. If control of the Register were lost, the reason for the Pharmaceutical Society would cease.

MR. J. J. LEWIS, Glasgow, said that some of the technical colleges were having difficulty in providing teachers for the two-year final course as it stood. If a three-year final course were instituted, those difficulties would be exacerbated.

### Both Courses Necessary

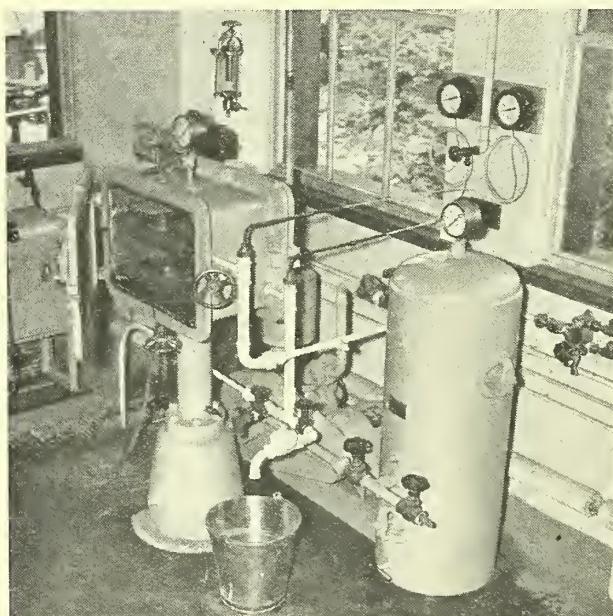
DR. McCALL said that the universities could not at present cope with all the pharmaceutical students. For many years it would be necessary to have diploma and degree courses. There were specialists required in pharmacy, and often the degree course was the better one for them. The Society had to maintain a Register, and in view of the importance of the National Health Service, it had to ensure that there were on the Register an adequate number of pharmacists. The educational policy subcommittee's interim report recommended that the standard of education for students in England and Wales should be the General Certificate of Education in five subjects. The Scottish Executive immediately saw that that was a retrograde step, and sent a number of recommendations to the Council. The first of those was "That the standard of general education should be raised to the equivalent of the Attestation of Fitness of the Scottish Universities Entrance Board." At the most recent meeting of the subcommittee those recommendations had been carefully considered. He hoped that as a result, the standard of entrance would be raised to the equivalent of University Entrance. Registration which would enable a person to acquire a pharmacy and conduct it should be delayed until that person had adequate experience.



Apparatus for measuring fluid flow and studying turbulence effects, necessarily a "permanent" installation, well exemplifies the essential character and methods of the School.

## A FORWARD STRIDE IN EDUCATION

Underlying the change from the School of Pharmacy of the Pharmaceutical Society to the School of Pharmacy, University of London, is a much more important, much more fundamental difference than a new set of governors—nothing less than a reorientation of ideas on pharmaceutical education that may influence the teaching of pharmacy throughout the world.



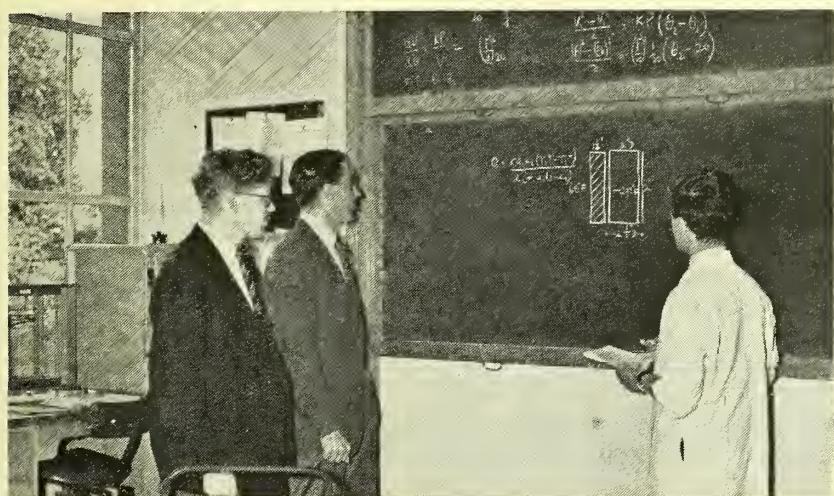
The feature to note in the hot-air oven installation is that it is adapted to give entry and exit temperature readings on the wall dials. Problems of heat transfer and heat loss can thereby be studied.

WHEN the Pharmaceutical Society in 1949 ceded control of its 107-year-old school of pharmacy, an institution with a proud record as pioneer and leader in the training of pharmacists, much more was involved than a transfer of management to the University of London.

On sentimental grounds members of the Pharmaceutical Society may regret the sacrifice of an institution which brought them much credit and prestige at home and abroad. That there were compelling financial reasons for the change everybody knows, and the economics and politics of the transfer cannot but hold a fascination to every pharmacist who takes an interest in the history of his craft. Those stories, partly told already, are for other occasions.

Educationally, to have maintained unimpaired the honoured traditions and methods of the School would have been a praiseworthy achievement, and the new premises and equipment would have ensured for students most congenial conditions of work.

But the empty shell of a building at Brunswick Square, waiting to be furnished and occupied, offered a unique opportunity to do something far more ambitious than to do the same things rather better than before. Those who have seen the pharmaceutics department functioning in the new building are soon aware that the School embodies new ideas. They are challenging ideas. Not everybody will at once find himself in wholehearted agreement with them. None can deny that they compel a rethinking about the basic aims and requirements in pharmaceutical education. The intense interest which visitors to the School from the



The relatively few students at any one time make possible almost individual attention by the tutor and intimate blending of theory and practice.

pharmaceutical departments of overseas universities display, provides proof of the challenging nature of the new set up.

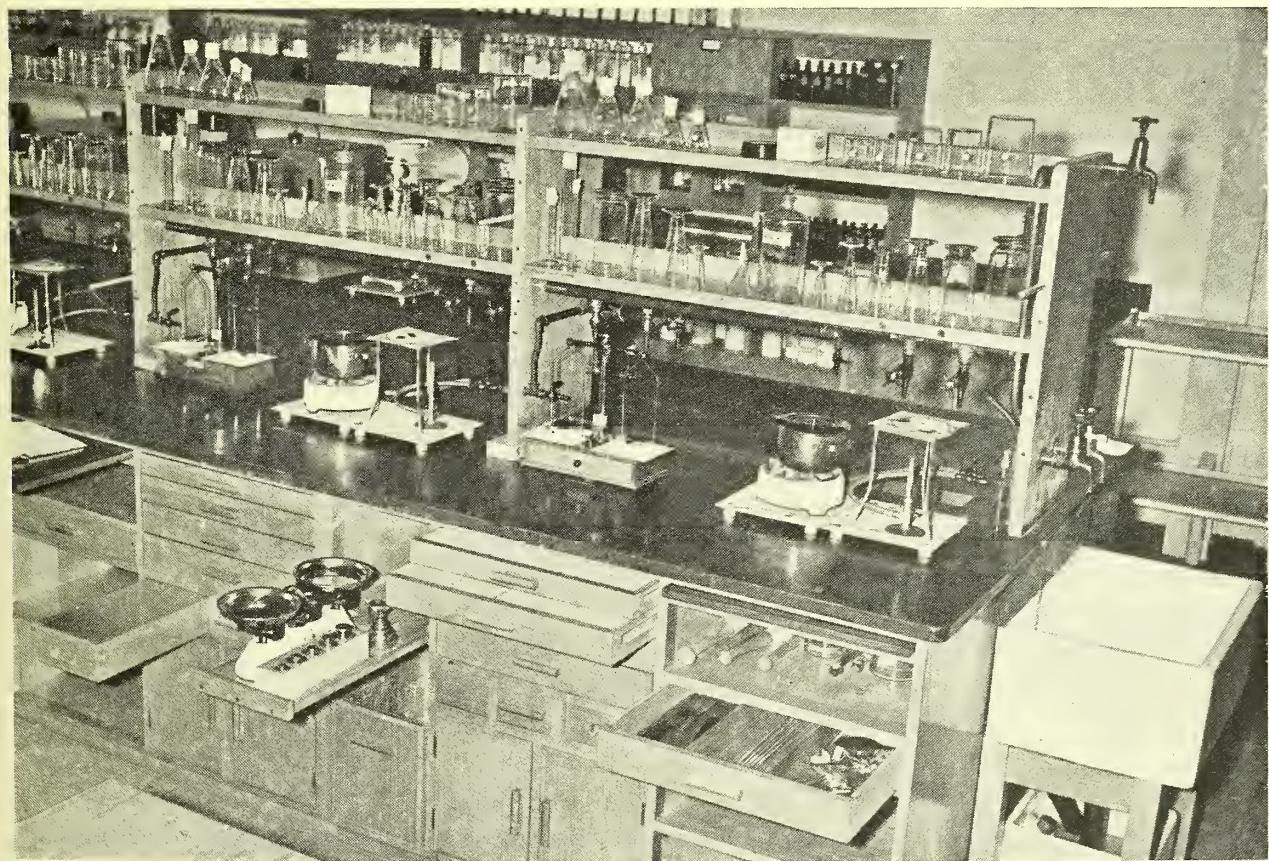
The nature of the change is perhaps most apparent in the pharmaceutical engineering science laboratory, a section of the department of pharmaceutics. Many pharmacy schools have in the past had departments in which were assembled representative miniatures of manufacturing plant. Though they may have had their value in making students aware that laboratory operations involve special problems to be solved if they are to be carried out on a manufacturing scale, there was always an air of unreality about such museums of apparatus, for they were often little more than that. Even to use much of it was rather like playing with toys.

The pharmaceutical engineering laboratory of the new

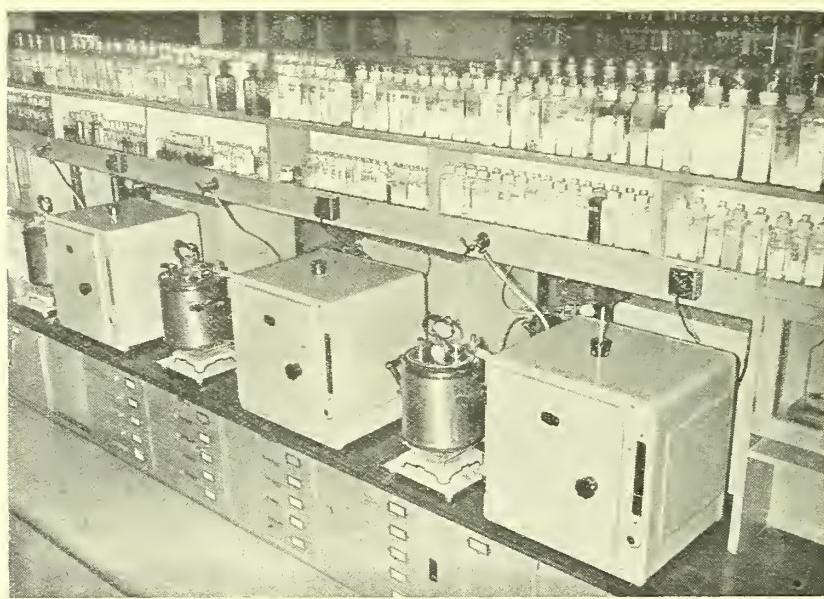
School presents a very different appearance. The characteristic components are wall frames on which infinitely variable installations may be set up, wheeled units that may be brought up and incorporated in a wall set-up or moved away to an odd corner when not required; and pipe sections, jointings and laggings. The various units are all standard or specially commissioned pieces of plant, not replicas of plant used in manufacturers' laboratories. Even the permanent installation upon one end wall is characteristic. It is a set-up of pipes the like of which is not to be found in a commercial pharmaceutical works, because it is not designed for

use but for study—study of the factors that influence the smooth or turbulent flow of liquids through pipelines. For that purpose it is equipped with batteries of gauges, multiple stopcocks and controls that enable conditions at different points in the same closed system to be observed and recorded. Both in fluid flow and in every other manufacturing operation nothing is taken for granted. Rule-of-thumb practices that have grown up in chemical factories often as the result of an operative's experience or observation are called in question and put to the test.

It might seem that such scepticism would go unrewarded—that if a practice has been in use for long periods in a manufacturing process then it must have proved its worth. Even if that were invariably so—and it is only in line with



First and second-year pharmaceutics laboratories are similar in pattern. A most compact use of drawers enables each student to work without waste of time and effort. Services are piped under a shelf to leave the bench-top clear for apparatus. For the same reason notes are written on a draw-out slide, with the student seated on a lower draw-out block. A scale with set of weights is also in evidence only when actually required for use.

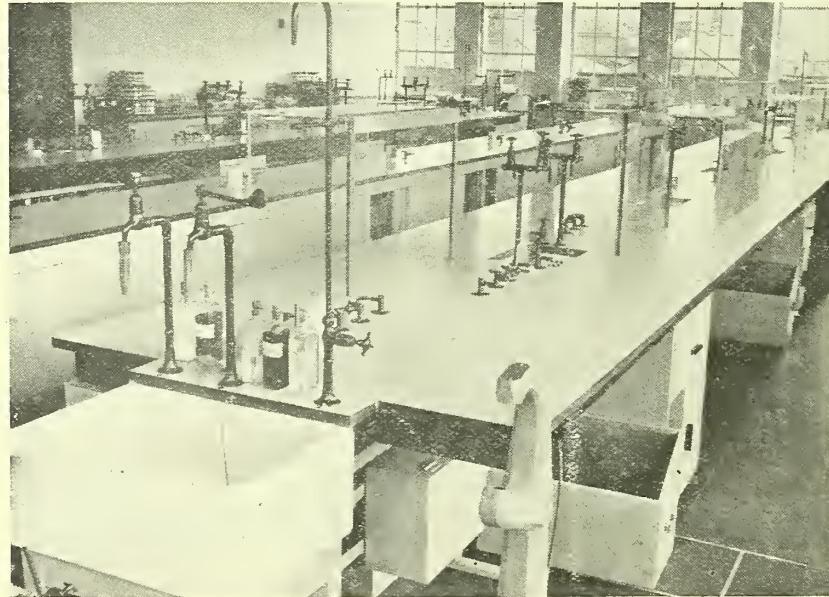


Each two students in the pharmaceutics laboratory share an autoclave and oven. At right of picture may be glimpsed the glass-doored recess holding chemical balance.

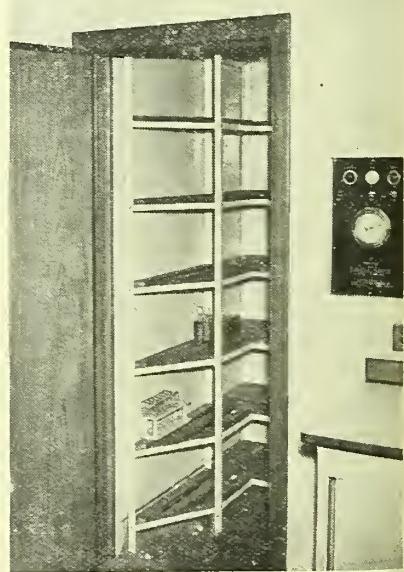
neering a distinct subject. An idea of the scope of the subject may be gleaned from some of the questions set at examinations, and the following are taken from actual examination papers:—

- (1) Write a short essay on the size reduction of pharmaceutical materials drawing attention to principles rather than to specific details.
- (2) Develop from first principles an equation which gives the rate of heat transfer flowing radially through a hollow cylinder of material through which there is a fall in temperature. Calculate the heat passing through a hollow cylinder of magnesia insulation if its length is 6 ft., internal dia. 1 in., external dia.  $5\frac{1}{2}$  in., with internal and external surface temperatures  $300^{\circ}$  F. and  $60^{\circ}$  F. respectively. Thermal Conductivity of Magnesia may be taken as 0·040 B.Th.U./sq. ft. hr.  $F^{\circ}$ . per ft.
- (3) A sterile room 200 ft. x 400 ft. x 20 ft. high is to be supplied with air at  $70^{\circ}$  F. and 50 per cent. absolute humidity. The air in the room is to be renewed at such a rate that eight complete changes are effected in one hour. Outside air is available at  $40^{\circ}$  F. and 20 per cent. absolute humidity. Give an account of the chief ways in which the required air can be obtained and indicate the routes on the humidity chart provided. Calculate the steam consumption with the plant working under stable conditions using *one* of the ways described assuming that steam is available at 10 p.s.i.g. and make-up water is available at  $35^{\circ}$  F. The following data may be used: specific heat of water = 1 B.Th.U./lb.  $F^{\circ}$ . Latent heat of water over range  $50-55^{\circ}$  F. = 1060 B.Th.U./lb.

Similarly bacteriology is taught to the medical student from the point of view of the pathological effects of bacteria on the human being. The pharmaceutical student who learns the subject as taught to medical students is not only acquiring a lot of knowledge he will not be called upon to apply. He is also missing a lot of essential knowledge of the effects of bacteria on the products used. Both subjects must therefore,



The main bacteriological laboratory. In foreground is an electric dryer for the hands. Aseptic screens on the bench-top may be folded flat when not in use. An incubator room (right) is entered from the laboratory.



Work is in an advanced stage on the fitting-out of the pharmaceutical chemistry department. As will be seen, the same careful and detailed planning has been applied. Note-taking, for example, is at slopes screened from the working benches.

according to the argument of the School, be taught by lecturers who know pharmacy as well as they know pharmaceutical engineering or bacteriology. That raised a problem at first, of course, namely where and how to find the right teacher. But just as Professor Berry himself a few years ago sat for and gained the Diploma on Bacteriology (the University award in that subject) in order to acquire the right to teach the subject in the special way he thought it demanded, so he encouraged a pharmacist (Dr. D. Train) to take a B.Sc. (Engineering) degree before becoming lecturer in pharmaceutical engineering.

In the pharmaceutics laboratories no time is wasted on trying to develop students' manipulative skill in compounding and dispensing medicines. Instead the approach, as everywhere else in the School, is experimental. Instead of being told, for example, the best way to prepare an emulsion in the mortar and the right proportions for the ingredients, students are set to find out those things for themselves by experiment.

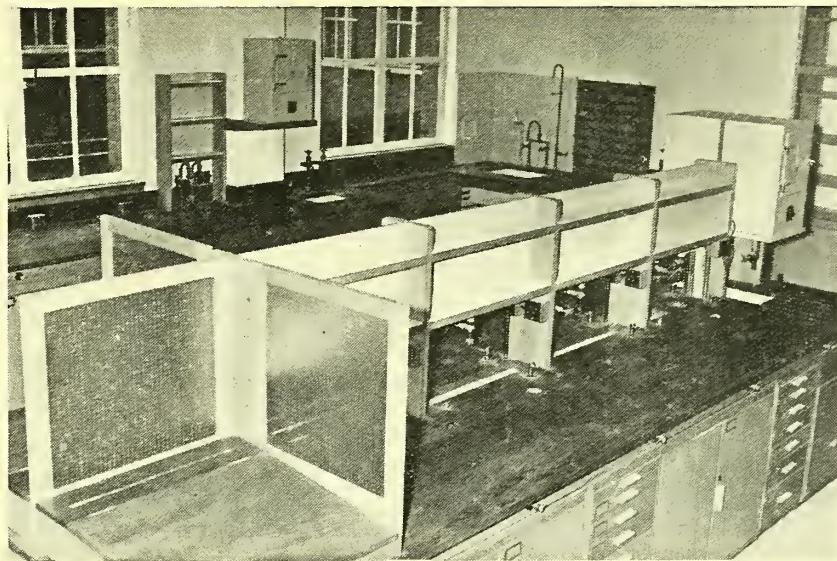
In the same way no attempt in the pharmaceutics laboratory is made to simulate the atmosphere or arrangement of a hospital or shop pharmacy. The equipment, apart from being outstanding in quality as one would expect in laboratories set up under the auspices of the University of London, is designed to streamline the student's practical work and enable him to devote his whole time and energy to work that makes a direct contribution to training. At the end of the course the student may not be so handy in turning out a mixture and giving a professional look to its wrapping, but he is better able to detect a hidden incompatibility. The planning of the benches saves wasted steps. To write up his notes the student does not fetch a chair or transfer to a desk. He pulls out a block slide to sit on and a shelf slide to write on. If he has to weigh an ingredient he pulls out another slide, with scale and weights all ready for use. The weighing operation is carried out at his side, and full space for movement and materials is left on the bench top.

And when a small quantity of an ingredient has to be weighed, the chemical balance is at hand at another appropriate and convenient level and in its own glass-doored recess. The benches are well provided with piped services (electricity, gas, hot and cold water, vacuum, steam where necessary). The placing of the benches allows ample freedom of movement and the generous windows and pleasant outlook help to make the working conditions almost ideally congenial.

First, second and third-year laboratories are in sequence, and beyond them is a laboratory for research students. In any university research is paramount, and at Brunswick Square there are also six smaller laboratories in which individual projects can be pursued.

The department has a separate aseptic laboratory and balance room, and any equipment that might be disturbing on account of its noise (disintegrators are an example) is isolated in a sound-proof room.

The professor of pharmaceutics from October 1 is Mr. E. Shotton, B.Sc., Ph.D., F.P.S., F.R.I.C., who has been on the staff of the School since 1934 except for the ten years 1939-48, during which he was engaged on development work at the Wellcome Chemical Works, Dartford. Dr. Shotton, in line with the policy of the School, has added a considerable amount of original research to his tutorial duties, particularly on the entrainment of liquids during distillation and the chromatographic separation of amino acids. As successor to Professor Berry in a department in which he has been senior



lecturer he will no doubt continue a policy he has done much to shape, both in the emphasis on experimental verification of accepted techniques of practice and in the emphasis on continued research.

The bacteriological laboratories are again admirably conceived for their function. The benchtops of Formica, mobile hot-air dryers, folding Perspex aseptic screens and the like are both means towards and symbols of the aseptic handling of pharmaceutical materials, and the incubation room with outside instrument panel and the "media kitchen," equipped with three autoclaves each of 18 cu. ft. capacity and vessel-cleaning plant, provide ancillary services on the same irreproachable level.

#### *Pharmaceutical Chemistry Department*

The pharmaceutics department, occupying a whole floor of the Brunswick Square building, has been in use for almost an academic year. Work is already in an advanced stage on the fourth-floor pharmaceutical chemistry department, and a picture is shown on this page of laboratory benches partly finished. The subject is one in which the special pharmaceutical "slant" on an academic study was first recognised, and the fact that it is universally recognised today as a subject in its own right may be taken as support for the view that bacteriology and engineering are in like case. The pharmaceutical chemistry department is expected to be in occupation in October, and that will leave at Bloomsbury Square only the departments of pharmacognosy and pharmacology.

All the students at the School take the Honours B.Pharm. course extending over three years, during the last of which they specialise in two of the following subjects: Pharmaceutical chemistry; pharmaceutical engineering science; pharmaceutics; pharmacognosy; pharmacology. There is little doubt that they will be much sought after as representing an aristocracy of graduates in pharmacy, invaluable to pharmaceutical manufacturers in this country and possibly in the United States and other overseas countries with still developing pharmaceutical manufacturing industries. As has been hinted, the forward outlook of the School, with its elimination of much that has been traditional in pharmaceutical education and its reference back of every aspect to first principles and experimental proof, are arousing interest in academic quarters overseas. If they are as successful as they promise to be, they will give a lead and a prestige to London-trained pharmacy graduates. That will be a good thing, but it by no means follows that the pattern is one that can or should be adopted in other institutions in which pharmacy is taught. Not every pharmacist can make his way in the higher flights of industry.

# QUALIFYING IN PHARMACY

## How and where to train in Britain

AND INFORMATION ON FURTHER STUDY AND ALLIED PROFESSIONS

UNTIL comparatively recently, the student intending to enter upon a pharmaceutical career had little difficulty in deciding which way to go about it. The road to the Society's diploma stretched clearly before him, with the degree course a by-way followed by the few. Nowadays, however, the road has a distinct fork, with qualification via the degree course becoming, if anything, gradually a main highway. The traditional method still has many adherents—there are still many, particularly among older pharmacists who qualified that way, who believe it is still the best and only way to produce a competent pharmacist; but allegiance to the new method grows rapidly every year.

The jumping-off ground is common to both ways; the student must produce evidence that he has reached a certain standard of general education. He must hold (a) the General Certificate of Education at ordinary or advanced level in English and mathematics and three other subjects passed at one sitting, or four other subjects at two sittings; or (b) the London Matriculation certificate or (c) in Scotland, the Leaving Certificate in English, mathematics and three other subjects.

There the ways divide. For the student entering pharmacy by the traditional method, registration is the next step. He applies to the secretary of the Pharmaceutical Society for registration as a student, for which a fee of £4 4s. is payable. He then enrolls for a course of three terms' full-time study at an institution approved by the Pharmaceutical Society for the purpose, for the Society's Intermediate examination. The subjects are chemistry, physics and biology, and the fee for entry to the examination is £6 6s. and for re-entry £4 4s. A student who has gained the General Certificate of Education at advanced level and has passed in those three subjects at not more than two sittings, is granted exemption from the Intermediate examination.

After the Intermediate examination, the student may elect to do his practical training, which may be undertaken either at that stage or after passing the Qualifying examination. If taken before the examination, the training occupies two years and is undertaken under articles of pupilage in a retail pharmacy, hospital or manufacturing laboratory (which in either case must be approved by the Pharmaceutical Society for the purpose); if taken afterwards, one year's practical training is accepted, and articles of pupilage are not required. The training need not be all in one place. It is at present still permissible for the practical training to be taken immediately on leaving school, before the

### Intermediate examination.

After passing the Intermediate examination, and perhaps taking his practical training, the student enters upon another academic course of two full-time sessions of three terms each, in an institution approved by the Pharmaceutical Society for the purpose, for the Society's Qualifying examination. The six subjects of the examination are pharmacognosy, pharmaceutics, physiology and pharmacology, pharmaceutical chemistry, and forensic pharmacy. The fee for entry to the examination is £12 12s., and for re-entry £10 10s. A candidate who has passed the Qualifying examination and completed his course of practical training, is entitled to registration as a pharmaceutical chemist if he has reached the age of twenty-one.

The register of pharmaceutical chemists is maintained by the Pharmaceutical Society as a statutory obligation. The fee for registration of a person who has satisfied the foregoing condition is £2 2s. if paid during the first six months of the year, or £1 1s. in the second six months. An annual fee of £3 13s. 6d. is payable thereafter, for the retention of his name on the register.

### Degrees in Pharmacy

The alternative method of becoming a pharmacist is by taking a degree in pharmacy, followed by a period of practical training, the taking of the Qualifying examination in forensic pharmacy only, and subsequent registration. The degree student usually takes the General Certificate of Education at advanced level in chemistry, physics and biology, or he may take the Intermediate examination for a degree in pharmacy, before proceeding to three or four years' study as an external or internal student of a university for his degree. On obtaining his degree he may apply to the Society for examination in forensic pharmacy only, and having passed that examination and completed one year's unarticled practical training he will, provided he has attained the age of 21, be entitled to registration as a pharmaceutical chemist.

There are a number of prizes awarded by the Council of the Pharmaceutical Society; pharmacists are allowed to enter for them at the competition next following the date on which they entered for the Qualifying examination; there are also research scholarships issued annually by the Society, and an annual travelling scholarship award.

A student of scientific and technical subjects is granted deferment of liability for calling up for National Service under certain conditions and "subject to making satisfactory progress in his studies," until after qualification.

The syllabuses of study for the Qualifying examination are as approved by the Privy Council on March 4, 1954. They are:—

### Pharmaceutical Chemistry

*The examination in this subject comprises two written sessions, each of three hours' duration and one practical session of six hours' duration. The examiners are not precluded from asking candidates oral questions during the practical sessions.*

The candidate will be required to have a knowledge of the following:—The principles of physical chemistry treated in an elementary manner mainly with reference to their pharmaceutical application. The general principles of inorganic chemistry based upon the characteristics of the elements and compounds shown by the periodic relationships and an elementary treatment of valency and the electronic structure of their atoms. An elementary treatment of atomic structure, isotopes, nuclear chemistry, natural and induced radioactivity. A general knowledge of organic chemistry, with particular reference to substances in frequent use in pharmacy. A knowledge of the structure, nomenclature and chemical properties of pharmaceutical importance of the following and such of their derivatives as are in the British Pharmacopœia:—Diphenyl ethane, triphenyl methane, naphthalene, anthracone, furan, pyrole, thiazole, pyrazole, imidazole, pyridine, quinoline, isoquinoline, acridine. The structure of phenanthrene. Chemical synthesis by means of the more important reagents. A knowledge of the chemistry of the following groups of medicinal organic compounds:—Sulphonamides, barbiturates, arsenical compounds, local anaesthetics. The general constitution and properties of the fixed oils, fats and waxes of the British Pharmacopœia. The principles involved in the estimation of the oxygenated constituents of essential oils. A knowledge of the structure and simple chemical properties of terpineol, limonene, carvone, menthol and camphor.

The general methods employed for the extraction of alkaloids and the methods employed for the elucidation of their structure. The preparation and structure of uric acid, caffeine, theobromine and theophylline. A knowledge of the properties of pharmaceutical importance of vitamins and hormones of the British Pharmacopœia. The general chemistry of the carbohydrates, with a knowledge of the structure, excluding stereo-chemical considerations of glucose and methyl-gluc-

cosides, fructose, sucrose, lactose, salicin. An elementary knowledge of the classification and general characteristics of the proteins and of essential amino acids and their relationship to proteins. The principles of analysis as exemplified by the determinations and processes indicated in the practical syllabus.

#### PRACTICAL

Volumetric analysis. Gravimetric analysis. The quantitative determination of an alkaloid in acid or alcoholic solution. The determination of the acid, saponification and iodine values of fixed oils and fats. The determination of aldehydes in volatile oils. The general methods for the detection and determination of chloride, sulphate, iron, arsenic and lead as impurities. The determination of the melting point of solids readily reducible to a powder and of the boiling point, density, refractive index and optical rotation of liquids. The identification of the functional groups and the preparation of simple crystalline derivatives of organic compounds. The identification, or reference to class, of organic chemicals of the British Pharmacopœia. The qualitative analysis of mixtures of inorganic substances and organic acids and their salts commonly used in medicine. The preparation of simple organic compounds illustrative of the general processes involved in preparing substances included in the theoretical syllabus.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners. In the practical examination the candidate may use any book or books he chooses to bring including his own laboratory notebooks.

#### Pharmaceutics

*The examination in this subject comprises two written sessions and two practical sessions each of three hours' duration. The examiners are not precluded from asking candidates oral questions during the practical session.*

The candidate will be required to have a knowledge of the following:—The historical development of pharmacy. The application of physical phenomena to pharmaceutical operations—change of state; systems of two or more components—solutions, dispersions. Pharmaceutical processes and products—preparation of material; solvents; extraction; assay and standardisation; clarification and filtration including removal of fat, proteins, gums, pectins, tannins; ultrafiltration; stabilisation—maintenance of stability during storage; enzymes. The products of the British Pharmacopœia and the British Pharmaceutical Codex to be used to illustrate the above. The nature and properties of materials used in the construction of pharmaceutical apparatus. Microbiology in so far as it affects the content of this syllabus. Sterilisation and the preparation of sterile medicaments and materials.

Disinfectants and antiseptics—methods for evaluation of disinfectants. Bacteriostatics and fungistatics. Asepsis in the preparation of sterile products—sources of contamination; aseptic precautions. The preparation, properties and storage conditions of immunological and diagnostic agents of the British Pharmacopœia; the general principles underlying their standardisation. Dispensing practice—ethical codes; the prescription—purpose, property rights; the doses of medicaments of the British Pharmacopœia; dispensing and compounding of medicines; containers; medical gases—containers and apparatus required and its use; equipment and organisation of the pharmacy.

#### PRACTICAL

The student must be prepared to carry out ordinary pharmaceutical operations including the making of preparations included in the British Pharmacopœia and the British Pharmaceutical Codex, the dispensing of prescriptions, the preparation and dispensing of sterile medicaments and materials, the detection of unusual doses and the completion of preparations in a proper manner. The preparation of sterile medicaments and materials includes the preparation of culture media, methods of evaluating antibiotics, sensitivity tests and tests for sterility.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners. In the practical examination the candidate will have the opportunity of consulting the British Pharmacopœia and the B.P.C.

#### Pharmacognosy

*The examination in this subject comprises one written session of three hours' duration and one practical session of three hours. The examiners are not precluded from asking candidates oral questions during the practical session.*

The candidate will be required to have a knowledge of the following:—1. The commerce in and history of crude drugs. 2. Systems of classification of crude drugs. 3. Cultivation, collection, preparation for the market and storage of crude drugs. 4. Changes occurring in the drying, storage and comminution of crude drugs. The factors and organisms influencing deterioration of crude drugs. 5. Methods used for the examination of crude drugs. The isolation and identification of tissues and cells. Microchemical tests for cell walls and cell contents. Microscopical measurements. The systematic description of crude drugs. 6. The macroscopical and sensory characters, biological and geographical sources, commercial varieties and adulterants and constituents of the crude drugs in frequent use in pharmacy. 7. The microscopy of drugs of organised structure in the whole, broken or powdered condition, as illustrated by cascara, clove, cardamom fruit, fen-

nel, belladonna herb, ginger, liquorice, ipecacuanha. 8. The microscopy of the starches and starch products of pharmaceutical importance. The use of microscopical characters to identify drugs of unorganised structure in frequent use in pharmacy. 9. Groups of drug constituents and their significance in pharmacy. Qualitative tests for the identification of, or the detection of adulteration in, the crude drugs in frequent use in pharmacy. 10. The types and significance of standards for crude drugs included in the British Pharmacopœia and the British Pharmaceutical Codex. The evaluation of crude drugs. 11. Unmedicated surgical dressings, their manufacture, structure and standards. The sources, preparation, characters, qualitative chemical tests and constituents of fibres used in the manufacture of surgical dressings. 12. The principles underlying the practical work of the syllabus.

#### PRACTICAL

The candidate must be prepared:—1. To examine and describe the macroscopical characters, the general distribution of tissues, the nature of the cell walls and the cell contents of crude drugs and to refer them to their morphological groups. 2. To identify in the entire or broken condition, by their gross characters and by qualitative tests, the crude drugs in frequent use in pharmacy and to state their biological and geographical sources. 3. To detect adulteration and deterioration in crude drugs in frequent use in pharmacy. 4. To analyse mixtures of crude drugs in the entire or broken conditions. 5. To examine microscopically, identify and describe the drugs included in paragraphs 7 and 8 of the theoretical syllabus. 6. To identify powders of single crude drugs and to report upon their purity. 7. To make microscopical measurements. 8. To examine, identify and report on the fibres and dressings named in paragraph 11 of the theoretical syllabus. 9. To carry out simple exercises in drug evaluation. 10. To recognise, in the entire condition, those crude drugs used in pharmacy or as sources of isolated principles.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners. In the practical examination the candidate may use the British Pharmacopœia, the British Pharmaceutical Codex and his own practical notebooks, except for the answering of those questions involving the identification and/or objective descriptions of crude drugs or the microscopical characters of those drugs indicated in paragraph 5 of the practical syllabus.

#### Physiology and Pharmacology

*The examination in this subject comprises one written session of three hours' duration and one practical session during the latter of which the candidate will be required to carry out*

a practical exercise (occupying possibly about forty minutes) and undergo an oral examination in which the examiner may ask questions on both the theoretical and practical work of the syllabus.

The candidate will be expected to possess an elementary knowledge of the basic facts in the branches of physiology and pharmacology listed below, and of the main methods by which these facts were established.

#### PHYSIOLOGY

(General): The properties and control of skeletal, visceral and cardiac muscle. The formation, properties, functions and circulation of the blood and lymph. The mechanism and control of pulmonary ventilation; gaseous interchange at the lungs and tissues. Artificial respiration. The alimentary tract. Basal metabolism and body heat. The principles involved in constructing a balanced diet; vitamins. The kidneys and urinary tract. The central and peripheral nervous systems, including the autonomic nerves. The special senses of sight, taste and smell. The structure and functions of the glands of internal secretion including (a) pituitary body, (b) thyroid and parathyroids, (c) pancreas, (d) suprarenals, (e) testes and ovaries. The elements of reproduction in man. (Histology): The candidate must possess an elementary knowledge of the microscopical structure of the following:—mucle and nerve; the heart, blood vessels and blood; lungs; the digestive glands; stomach and intestines; liver; kidneys; skin; the endocrine glands and the reproductive organs, including the mammary gland and the

placenta. (Biochemistry): The biochemistry and metabolism of carbohydrates, fats and proteins. The composition and functions of the salivary, gastric, biliary, pancreatic and intestinal secretions. The composition and nutritional value of common food stuffs. The chemistry of muscular contraction. The composition of blood, lymph and cerebrospinal fluid. Normal and abnormal constituents of urine.

#### PHARMACOLOGY

Scope of pharmacology. Theories of and factors affecting drug action. Quantitative methods in pharmacology. Dose-response curves. The general principles and methods underlying the biological assays of the British Pharmacopoeia, excluding the assays of sera, vaccines and bacterial derivatives. Special attention should be given to the determination of toxicity and LD<sub>50</sub>. An elementary study of the statistical principles involved in the assessment of the error of these quantitative tests. Drugs affecting structures innervated by the autonomic nervous system and the somatic motor nerves. Drugs used as central nervous depressants and stimulants. Anti-pyretics. Local anaesthetics. Emetics, antacids; purgatives; astringents; diuretics. Disinfectants, bactericides and bacteriostatics including antibiotics. The application of pharmacological principles in treatment of poisoning.

#### PRACTICAL

The candidate must be prepared:—To show his acquaintance with the methods employed for the demonstration of fundamental physiological and pharmacological processes, as laid

down in the foregoing syllabus, and to carry out such chemical manipulations or simple experiments as are comprised therein. To recognise and describe with diagrams, histological preparations of any tissue or of any organs mentioned in the foregoing syllabus.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners.

#### Forensic Pharmacy

*The examination in this subject comprises one written session of three hours' duration.*

The candidate will be required to have a knowledge of the following enactments and the subordinate legislation made under them, in so far as they are applicable to the practice of pharmacy in Great Britain:—the Pharmacy and Poisons Acts, 1933, and the Pharmacy Act, 1954, the Dangerous Drugs Act, 1951, the Acts relating to the National Health Service, the Shops Act, 1950, the Protection of Animals Act, the Food and Drugs Act, the Venereal Disease Act, the Cancer Act, the Therapeutic Substances Act, the Therapeutic Substances (Prevention of Misuse) Acts, 1947 to 1953, the Radio-Active Substances Act, and the Acts relating to the sale of spirits (including methylated spirits) and medicated wines and the sale of abortifacients.

## OTHER COURSES OPEN TO

## STUDENTS

#### London External Degrees

THE following technical colleges offer courses leading to the Intermediate Bachelor of Pharmacy (London) (external) examination. In the list the date of commencement is followed (in parentheses) by the date of enrolment for the course:—

ABERDEEN: Robert Gordon's Technical College, October 2 (September 1); BLACKBURN: Municipal Technical College, September 10 (ditto); BRADFORD: Technical College, October 1 (September 25–28); BRIGHTON: Technical College, September 20 (September 18); BRISTOL: College of Technology, September 20 (by September 1); BURNLEY: Technical College, September 24 (September 10); CHATHAM: Medway College of Technology, September 11 (September 11); COLCHESTER: North-east Essex Technical College, September 17 (September 10–12); COVENTRY: Technical College, September 17 (September 6); CROYDON: Technical College, September 24 (September 17–19); DAGENHAM: South-east Essex Technical College, September 18 (September 17); DARTFORD: North-west Kent College of Technology, September 10 (immediately); DERBY: Technical College, September 24 (September 17); DUNDEE: Technical College, September 14 (immediately); EWELL: County Technical College, September 17 (September 12–

14); FOLKESTONE: Technical Institute, September 17 (immediately); GUILDFORD: County Technical College, September 17 (immediately); HALIFAX: Technical College, September 17 (September 4–6); HUDDERSFIELD: Technical College, September 17 (September 10–13); HULL: College of Technology, September 17 (September 10–15); KINGSTON-ON-THAMES: Technical College, September 17 (September 10–11); LEICESTER: College of Technology, September 17 (immediately); LONDON: Acton Technical College, September 17 (September 10); Northern Polytechnic (details from the college); Norwood Technical College, September 10 (immediately); West Ham College of Technology, September 24 (immediately); Woolwich Polytechnic, September 24 (application by letter); NORWICH: City College and Art School, September 17 (September 10–11); PORTSMOUTH: College of Technology, September 17 (September 11–13); PRESTON: Harris College of Further Education, September 24 (September 17–22); SALFORD: Royal Technical College, September 18 (September 11); SOUTHEND-ON-SEA: Municipal College, September 10 (ditto); SUNDERLAND: Technical College, October 1 (September 19); SWANSEA: Technical College, September 17 (September 10); TORQUAY: South Devon Technical College, September 17

(ditto); WEYBRIDGE: Brooklands County Technical College, September 19 (September 12–14); WIGAN: Technical College, September 24 (September 10).

#### Final B.Pharm.

The following technical colleges offer courses for the final Bachelor of Pharmacy (London) (external) examination: BRADFORD: Technical College, October 1 (September 25–28); BRIGHTON: Technical College, September 20 (no vacancies); LEICESTER: College of Technology, September 17 (no vacancies); PORTSMOUTH: College of Technology, September 17 (September 11–13); SUNDERLAND: Technical College, October 1 (September 19).

#### Revision and Post-graduate Courses, etc.

BRADFORD: Technical College; facilities for post graduate research.

BRIGHTON: Technical College; course of ten lectures on "A Modern Approach to the Study of Reaction Mechanisms," commencing October 5 (enrolment, October 5).

BOURNEMOUTH: Municipal College; course of lectures on "Synthetic Drugs," during the Autumn term.

BRISTOL: College of Technology; any course arranged subject to demand.

DARTFORD: North-west Kent College of Technology; eight weekly lectures on the history of pharmacy, commencing October 22; eight weekly lectures on pharmaceutical engineering, commencing January 14; twelve weekly lectures on "An Introduction to Mathematical Analysis applied to Experimental Work and Research," commencing October 30; fifteen weekly lectures and practical laboratory work on microbiology.

EDINBURGH: Heriot-Watt College; post-graduate course for associateship of the college in applied pharmacy, commencing October 9 (enrolment July 31).

LIVERPOOL: College of Technology; pharmacy post-graduate course in aseptic techniques, physiology and pharmacology, microscopy of foods and drugs, and recent developments in pharmacy; post-graduate courses in fermentation, paper chromatography, electrometric methods, radiochemical methods, statistical analysis, microbiology, oils and fats, and chemical engineering.

LONDON: Acton Technical College; course of twelve lectures in radiochemistry, commencing September 19; twelve lectures on the chemistry of oils, fats and waxes, with special reference to analytical technique, commencing September 21; six lectures on physical-organic chemistry, commencing November 1; special laboratory course of 30 weekly afternoon meetings on the chemistry and technology of oils, fats and waxes, commencing September 21; six weekly lectures on plastics technology, commencing September 25; thirty weekly lectures on advanced chemistry of plastics, high polymer chemistry, commencing September 20; thirty weekly lectures and practical work on the chemistry and technology of cosmetics (advanced third year course), commencing September 17; four-day full time laboratory course on paper chromatography and ion exchange, commencing September 4. Norwood Technical Institute; course of twelve lectures and practical work on microchemical methods, commencing January, 1957. Regent Street Polytechnic; six post-graduate lectures on "Ionic Reactions in Organic Chemistry," commencing November 2.

MIDDLESBROUGH: Constantine Technical College; short course in physical methods of analysis, during the Spring term.

ROTHERHAM: College of Technology; weekly lectures on advanced chemical analysis, for students with degree, higher national certificate or equivalent.

SUNDERLAND: Technical College; full-time revision course for the Pharmaceutical Chemist Qualifying examination, commencing October 8 (enrolment September 19).

SWANSEA: Technical College, evening courses in biology and in biochemical analysis if demand justifies.

### Diploma in Biochemical Analysis

The course for the Diploma in Biochemical Analysis of the Pharmaceutical Society is concerned with the chemi-

cal examination of urine, blood, etc. Courses are available at:—

LONDON: Chelsea Polytechnic, October 17 (September 17). NOTTINGHAM: The University, October 5. SOUTHDON-ON-SEA, Municipal College, October 1 (September 17-21). SUNDERLAND: Technical College, October 8 (September 19). SWANSEA: Technical College (if demand justifies), September 17 (September 10).

### Apothecaries' Assistants

COMPLYING with obligations laid down in the Apothecaries Act, 1815, the Society of Apothecaries of London, Black Friars Lane, Queen Victoria Street, London, E.C.4, continues to issue "certificates of competence to act as assistants in dispensing." Candidates for the examination are examined in dispensing, chemistry, pharmacology, forensic pharmacy, and the translation of prescriptions. Examinations are held in January, April, July and October of each year. Courses (where school is not named refer to list on p. 66):—

London: London College of Pharmacy for Women, 7 Westbourne Park Road, Bayswater, London, W.2. Aston: Technical College. Belfast: College of Technology. Blackburn (chemistry only). Bolton. Bournemouth. Bradford. Brighton. Bristol: The Dispensary, Bristol General Hospital, College of Technology. Cardiff: Corby Technical College. Coventry (chemistry only). Derby (chemistry only; pharmacology and dispensing might be arranged at a hospital). Edinburgh: Chemical Laboratory, Royal Infirmary. Huddersfield (chemistry only). Hull (chemistry only). Ipswich: East Suffolk and Ipswich Hospital. Leicester. Liverpool: Central Technical College. Luton: Luton and South Bedfordshire College. Newark, Notts: County Technical College. Newcastle-on-Tyne: Royal Victoria Infirmary, Queen Victoria Road. Newport (chemistry only). Northampton (chemistry only). Norwich (chemistry only). Oxford: Schools of Technology, Art and Commerce (chemistry only). Plymouth. Portsmouth. Sheffield: College of Technology (chemistry only). The Royal Sheffield Infirmary and Hospital. Smethwick: Chance Technical College. Southend. Stockport. Stoke-on-Trent (chemistry only). Sunderland. Swansea (chemistry only). Wolverhampton and New Cross Hospital. N.B. Arrangements may be made to study chemistry at a technical college, and to complete the training in a chemist's shop or hospital dispensary.

### Pharmacy (Northern Ireland)

NEW Regulations relating to apprenticeship and the Pharmaceutical Society of Northern Ireland's examinations have been made by the Council of the Society and those are coming into force within the next few weeks.

**Apprenticeship:**—Up to October 1, 1957, a candidate to be eligible for registration as an apprentice must have passed on one and the same occasion either the Matriculation examination of any University in the United Kingdom, the Grammar School Senior Certificate examination of the Northern Ireland Ministry of Education or the General Certificate of Education of the University of London in English or English language, a mathematical subject and three of the following:—English literature (where that is a separate subject), Latin, French, German, domestic science, history, geography, botany or biology or zoology, chemistry, physics or

mechanics. After October 1, 1957, a candidate must have passed in English or English language, a mathematical subject, physics, chemistry and one of the following:—English literature (where that is a separate subject), a foreign language, domestic science, history (modern or ancient), geography, botany or biology or zoology.

### Preliminary Scientific Examination:

After registration the student must attend a one-year full-time course of instruction in the subjects of Final Part I Qualifying Examination. A student who has failed on three occasions to pass the examination may be permitted a fourth attempt only if so recommended by the board of examiners. A student who has passed the Final Part I Qualifying examination must then serve an apprenticeship of two years under a registered pharmacist.

**Pharmaceutical Chemist Qualifying Examination:**—After completion of apprenticeship the student must attend a two-year course of study for the Final Part II Qualifying examination. On passing that examination, provided he is not less than twenty-one years of age, the student may receive a certificate of qualification. A person who has passed the final examination for the degree of pharmaceutics of the Queen's University, Belfast, and who satisfies the Examiners in such other subjects as the Council may determine shall be granted a certificate of qualification.

**Syllabuses:**—The syllabuses for the Intermediate and Qualifying examinations are the same as for the corresponding examinations in Britain, except in the case of pharmacognosy where the old syllabus, setting out the drugs to be studied, is retained. Examinations are being held in June and December of each year. The entrance fees are the same as for the corresponding examinations in Britain.

A student who has failed to pass the Final Part II Qualifying examination on any occasion may be required to undertake an approved course of study in one or more subjects before being permitted to enter again.

### Pharmacy (Republic of Ireland)

AN applicant for registration as a pharmaceutical student in the Republic of Ireland must have passed a preliminary examination in English, Irish, Latin, mathematics, and a fifth subject and in addition the pre-registration examination of the Pharmaceutical Society of Ireland. A candidate who has gained credit for physics and chemistry (or general science) in the preliminary examination or in certain university examinations is exempt from the pre-registration examination. The preliminary examination may be: (a) the Leaving Certificate examination of the Irish Department of Education, (b) the matriculation examination of the National University, (c) any examination of equivalent standard, conducted outside the State, which may be acceptable to the Council.

**The Science Course.**—A registered student must attend the Society's College for a continuous course of three terms of lectures in pharmaceutical and general chemistry, biology, pharmaceutics, forensic pharmacy,

# COURSES FOR PHARMACY STUDENTS

## I. INTERMEDIATE EXAMINATION

THE following table gives details of courses for the Pharmaceutical Society's Intermediate examination. Intending students should apply for places as soon as possible.

The designation of the department is indicated by the italic letter following the name of the institution:—

*B* = Biology;

*C* = Chemistry;

*P* = Pharmaceutical;

*S* = Science

Centre	Institution	Head of Department	Session starts	Enrolment
ABERDEEN ...	Robert Gordon's Technical College* <i>P</i>	J. E. Bowen, B.Sc., F.P.S., F.R.I.C.	October 2	September 1
BIRMINGHAM ...	College of Technology* <i>P</i>	F. R. C. Bateson, B.Pharm., F.P.S.	October 1	No vacancies
BIRKENHEAD ...	Technical College <i>S</i>	D. G. Cooper, B.Sc., F.R.I.C., A.I.B.P.	September 3	September 3
BLACKBURN ...	Municipal Technical College <i>S</i>	A. Walton, M.Sc., F.R.I.C.	September 10	September 10
BOLTON ...	Technical College <i>C</i>	D. C. Griffiths, M.Sc., Ph.D., F.R.I.C.	September 10	August 28-31
BOURNEMOUTH ...	Municipal College of Technology and Commerce <i>S</i>	C. J. Cooper, B.Sc., A.R.C.S., A.R.I.C.	September 17	September 10-13
BRADFORD ...	Technical College* <i>P</i>	F. N. Appleyard, B.Sc., F.P.S., F.R.I.C.	October 1	September 25-28
BRIGHTON ...	Technical College* <i>P</i>	James C. Parkinson, B.Pharm., Ph.D. (London), F.P.S., A.R.I.C.	September 20	September 18
BRISTOL ...	College of Technology* <i>P</i>	D. A. Norton, B.Sc., F.P.S., A.C.T. (Birm.)	September 20	By September 1
BURNLEY ...	Municipal College <i>S</i>		September 24	September 10
CARDIFF ...	Welsh College of Pharmacy, College of Technology* <i>P</i>	R. V. Lloyd, B.Pharm., F.P.S.	September 27	September 26
CARLISLE ...	Technical College <i>C</i>	F. H. Day, Ph.D., M.Sc., F.R.I.C.	September 17	September 11-14
CHATHAM ...	Medway College of Technology <i>C</i>	H. I. Stonehill, Ph.D., B.Sc., F.R.I.C.	September 11	September 11
CHELMSFORD ...	Mid-Essex Technical College <i>S</i>	M. R. Gridley, B.Sc., F.Inst.P.	September 24	Immediately
CHELTONHAM ...	North Gloucestershire Technical College <i>S</i>	L. McPherson, M.Sc., F.Inst.P.	September 17	September 10-14
COLCHESTER ...	North-east Essex Technical College <i>B</i>		September 17	September 10-12
COLWYN BAY ...	Grammar School <i>S</i>	T. O. Griffiths, B.Sc., F.R.I.C.	September	April
COVENTRY ...	Technical College <i>C</i>	H. C. Smith, M.Sc., Ph.D., F.R.I.C.	September 17	September 6
CROYDON ...	Technical College <i>C</i>	S. R. Robinson, Ph.D., B.Sc., F.R.I.C.	September 24	September 17-19
CRUMLIN ...	Technical College of Monmouthshire <i>C</i>	V. A. Hewlett, F.R.I.C., M.Sc.	September 17	September 10
DAGENHAM ...	South-east Essex Technical College <i>C</i>	J. Ratcliffe, B.Sc., F.R.I.C.	September 18	September 17
DARTFORD ...	North-west Kent College of Technology <i>S</i>	J. R. Barr, M.Sc., F.R.I.C.	September 10	Immediately by letter
DERBY ...	Technical College <i>C</i>	A. G. Catchpole, Ph.D., B.Sc., F.R.I.C.	September 24	September 17
DONCASTER ...	Technical College <i>C</i>	W. F. Andrews, M.Sc., B.Sc., A.R.I.C.	September 24	September 17
DUNDEE ...	Technical College* <i>P</i>	H. A. Perkin, B.Pharm., F.P.S.	September 24	Up to September 24
EDINBURGH ...	Heriot-Watt College* <i>P</i>	H. H. Campbell, B.Sc., F.P.S., F.R.I.C.	October 9	July 31
ENFIELD ...	Technical College <i>C</i>	To be appointed	September 17	September 5-7 and 10-11
EWELL ...	County Technical College <i>S</i>	R. L. D. Ellis, M.Sc., F.R.I.C.	September 17	September 12-14
FOLKESTONE ...	Technical Institute <i>C</i>	K. L. Scott, Ph.D., B.Sc.	September 17	Immediately
GLoucester ...	Technical College <i>S</i>	R. B. Williams, B.A., B.Sc., D.Phil., M.A.	September 24	September 10-13
GUILDFORD ...	County Technical College <i>C</i>	J. C. Bevan, M.A., B.Sc., A.R.I.C.	September 17	Immediately
HALIFAX ...	Technical College <i>C</i>	L. Hey, B.Sc., Ph.D., A.R.I.C.	September 17	September 4-6
HUDDERSFIELD ...	Technical College <i>C</i>	Dr. Tittensor	September 17	September 10-13
HULL ...	College of Technology <i>C</i>	L. Balmforth, B.Sc., F.R.I.C.	September 17	September 10-15
KINGSTON-ON-THAMES ...	Technical College <i>C</i>	H. P. Starck, M.A.	September 17	September 10-11
LEEDS ...	College of Technology <i>C</i>	W. R. Burnham, M.Sc., Ph.D., A.R.I.C.	September 5	September 4
LEICESTER ...	College of Technology* <i>P</i>	C. Gunn, B.Pharm., F.P.S.	September 17	No vacancies
LIVERPOOL ...	College of Technology* <i>P</i>	T. L. Bowyer, F.P.S., F.R.I.C.	September 17	September 14
LONDON ...	Acton Technical College <i>C</i> Chelsea Polytechnic* <i>P</i> Northern Polytechnic <i>C</i> Norwood Technical College <i>C</i> Regent Street Polytechnic <i>C</i> South-west Essex Technical College <i>S</i> West Ham College of Technology <i>C</i> Woolwich Polytechnic <i>C</i>	J. H. Skellon, T.D., M.Sc., Ph.D., F.R.I.C. C. Morton, B.Sc., F.P.S. Details from the college M. J. Birchenough, Ph.D., F.R.I.C. W. Davey, Ph.D., B.Sc., F.R.I.C. Details from the college F. L. Allen, M.Sc., Ph.D., F.R.I.C. A. I. Vogel, D.Sc., D.I.C., F.R.I.C. G. Bulmer, M.A., Ph.D., F.R.I.C.	September 17 September 24 September 10 September 18 September 24 September 24 September 24 September 24	September 10 No vacancies Immediately September 10 No vacancies Immediately By letter Immediately
MIDDLESBROUGH	Constantine Technical College <i>C</i>		September 17	

Centre	Institution	Head of Department	Session starts	Enrolment
NEATH ...	Technical College S	E. McCutcheon, M.Sc.	September 24	September 17
NEWCASTLE ...	Rutherford College of Technology C	E. W. Mills, B.Sc., Ph.D., F.R.I.C.	September 24	September 10-14
NEWPORT ...	Technical College C	L. McGrath, M.Sc., F.R.I.C.	September 10	September 3
NORTHAMPTON ...	College of Technology S	W. Siddall, B.Sc., Ph.D., A.R.I.C.	September 17	September 10-14
NORWICH ...	City College and Art School S	R. Jones, B.Sc.	September 17	September 10-11
NOTTINGHAM ...	Technical College S	J. R. Rowlands, M.Sc., A.R.I.C.	September 24	September 10-14
PAISLEY ...	Technical College C	J. S. McLean, B.Sc., A.R.I.C.	October 1	September 10-13
PLYMOUTH ...	Technical College* P	V. Smith, M.Sc., F.R.I.C., F.P.S.	September 17	Before September 1
PORPSMOUTH ...	College of Technology* P	E. Thorpe, B.Sc., B.Pharm., F.P.S.	September 17	September 11-13
PRESTON ...	Harris College of Further Education C	E. Taylor, M.Sc., F.R.I.C.	September 24	September 17-22
REDRUTH ...	Cornwall Technical College S	J. R. Slater, B.Sc.	September	
ROTHERHAM ...	College of Technology C	M. B. Thompson, A.R.S.M., B.Sc., Ph.D.	September 24	September 10-14
ST. HELENS ...	Technical College C	L. W. M. Tyrrell, B.Sc., Ph.D., F.R.I.C.	September 24	September 11-14
SALFORD ...	Royal Technical College C	G. R. Ramage, D.Sc., Ph.D., F.R.I.C.	September 18	September 11
SHREWSBURY ...	Technical College S	K. H. Williams, B.Sc.	September 11	September 11
SOUTHEND-ON-SEA ...	Municipal College C	C. R. Barnes, B.Sc., A.R.I.C.	September 10	September 10
SOUTHPORT ...	Technical College S	A. E. Hollis, B.Sc.	September 3	Immediately
STOCKPORT ...	The College C	H. H. Armstrong, B.Sc., F.R.I.C.	September 24	September 18-19
STOKE-ON-TRENT ...	North Staffordshire Technical College C	W. K. Wilde, M.Sc., F.R.I.C.	September 17	September 10-14
SUNDERLAND ...	Technical College* P	F. H. Oliver, B.Sc., B.Pharm., F.P.S.	October 1	September 19
SWANSEA ...	Technical College C	A. R. Lowe, Ph.D., B.Sc., D.I.C., F.R.I.C.	September 17	September 10
TORQUAY ...	South Devon Technical College P	C. A. Colman-Porter, M.Sc., F.R.I.C., F.C.S.	September 17	September 17
WEYBRIDGE ...	Brooklands County Technical College S	R. C. Rogers, M.Sc., A.R.C.S., A.R.I.C.	September 18	September 11-13
WIGAN ... ...	Wigan Mining and Technical College C	H. K. Dean, B.Sc., Ph.D., F.R.I.C.	September 24	September 10-13
WOLVERHAMPTON ...	Technical College C	M. Schofield, M.A., B.Sc., F.R.I.C.	September 10	September 3-5
WREXHAM ...	Denbighshire Technical College C	E. W. Claydon, Ph.D., F.R.I.C.	September 17	September 10-12

\*Institutions also offering a course for the Qualifying examination.

## 2. QUALIFYING EXAMINATION

Centre	Institution	Head of Pharmaceutical Department	Session starts	Enrolment
ABERDEEN ...	Robert Gordon's Tech. College	J. E. Bowen, B.Sc., F.P.S., F.R.I.C.	October 2	September 1
BIRMINGHAM ...	College of Technology	F. R. C. Bateson, B.Pharm., F.P.S.	October 1	September 17-24 (No vacancies)
BRADFORD ...	Technical College	F. N. Appleyard, B.Sc., F.P.S., F.R.I.C.	October 1	September 25-28
BRIGHTON ...	Technical College	James C. Parkinson, Ph.D., B.Pharm. (London), F.P.S., A.R.I.C.	September 20	No vacancies
BRISTOL ...	College of Technology	D. A. Norton, B.Sc., F.P.S., A.C.T.(Birm.)	September 18	By September 1
CARDIFF ...	Welsh College of Pharmacy, College of Technology and Commerce	R. V. Lloyd, B.Pharm., F.P.S. H. A. Perkin, B.Pharm., F.P.S. H. H. Campbell, B.Sc., F.P.S., F.R.I.C.	September 27 September 24 October 9	No vacancies Immediately July 31
DUNDEE ...	Technical College	J. P. Todd, Ph.D., F.P.S., F.R.I.C.	October 1	No vacancies
EDINBURGH ...	Heriot-Watt College	C. Gunn, B.Pharm., F.P.S.	September 17	No vacancies
GLASGOW ...	Royal Technical College	T. L. Bowyer, F.R.I.C., F.P.S.	September 17	No vacancies
LEICESTER ...	College of Technology	C. Morton, B.Sc., F.P.S.	September 24	No vacancies
LIVERPOOL ...	College of Technology	K. Bullock, Ph.D., F.P.S.	October 4	No vacancies
LONDON ...	Chelsea Polytechnic	G. E. Trease, B.Pharm., F.P.S., F.R.I.C., F.L.S.	October 5	No vacancies
MANCHESTER ...	The University	V. Smith, M.Sc., F.R.I.C., F.P.S.	September 17	August 1
NOTTINGHAM ...	The University	E. Thorpe, B.Sc., B.Pharm., F.P.S.	September 17	No vacancies
PLYMOUTH ...	Technical College	F. H. Oliver, B.Sc., B.Pharm., F.P.S.	October 1	September 19
PORTSMOUTH ...	College of Technology			
SUNDERLAND ...	Technical College			

## 3. UNIVERSITY INTERNAL DEGREE COURSES IN PHARMACY

The following universities and colleges offer courses for internal degrees in pharmacy.

Centre	Institution	Head of Pharmaceutical Department	Session starts	Enrolment
CARDIFF ...	Welsh College of Pharmacy, College of Technology and Commerce	R. V. Lloyd, B.Pharm., F.P.S	September 27	No vacancies
GLASGOW ...	Royal Technical College	J. P. Todd, Ph.D., F.P.S., F.R.I.C.	October 1	No vacancies
LONDON ...	Chester Polytechnic	C. Morton, B.Sc., F.P.S.	September 24	No vacancies
MANCHESTER ...	School of Pharmacy, University of London	W. H. Linnell, D.Sc., M.Sc., Ph.D., F.P.S.	October 3	No vacancies
NOTTINGHAM ...	The University	K. Bullock, Ph.D., F.P.S.	October 4	No vacancies
	The University	G. E. Trease, B.Pharm., F.P.S., F.R.I.C., F.L.S.	October 5	No vacancies

history of pharmacy and ethics. A student must pass terminal examinations and the First Professional examination (held annually).

**Apprenticeship.**—A student who has passed the First Professional examination must serve three years as an apprentice in an approved pharmacy.

**The Pharmacy Course.**—At the conclusion of apprenticeship a student returns to the Society's College for a further continuous course of three terms of lectures in pharmaceutical chemistry, pharmaceutics, pharmacognosy, forensic pharmacy, compounding and dispensing, and the Irish Pharmacopoeia. A student who has passed terminal examinations is entitled to enter for the Second Professional examination. On passing this he is eligible for registration as a pharmaceutical chemist.

**Syllabus: Chemistry.**—(a) *Theoretical and Physical Chemistry*: Atomic structure, gas laws, kinetic theory of gases, osmotic pressure, law of mass action, laws of electrolysis, ionisation, solubility products, pH values (including buffer solutions and indicators), molecular weight determinations, radioactivity, bond structure. (b) *Inorganic Chemistry*: A study of the chemistry of the elements based on the periodic table interpreted in the light of modern views on atomic structure. (c) *Organic Chemistry*: A general study of aliphatic and aromatic compounds, with special reference to those of pharmaceutical importance.

**Practical:** Qualitative analysis of simple salts and of mixtures containing not more than two basic and two acidic radicals. Volumetric analysis, including acidimetry and alkalimetry, permanganate, iodine and silver nitrate titrations; simple problems involving such titrations. Preparation of simple organic substances, including tests for purity such as melting-point and boiling-point determinations.

**PHARMACEUTICS.**—*Theoretical*: Preparation of pharmaceutical products of the Pharmacopoeia, processes there employed, official methods of standardisation, processes employed in the compounding of prescriptions, precautions in aseptic dispensing, pharmaceutical sterilisation, application of physico-chemical concepts to pharmacy (e.g., osmotic pressure, pH solubility product, acid-base reactions, etc.). *Practical*: Weighing, measuring and compounding medicines, writing directions and finishing properly, calculation of quantities in prescriptions, detection of incompatibilities and overdoses, preparation of official and semi-official galenicals, sterilisation of medicaments and solutions for injection, identification of medicaments and preparations commonly used in medicine, compounding under aseptic conditions.

**PHARMACOGNOSY.**—The recognition of specimens of vegetable and animal substances used in medicine, a knowledge of the family, methods of cultivation, collection and preservation of drugs, and their source (botanical or zoological, and geographical); their chief constituents and adulterants; their galenical preparations and doses.

**BOTANY.**—General morphology and physiology of the plant kingdom, systematic botany, characteristics of the principal members of the vegetable

kingdom (algae, fungi, pteridophyta and thallophyta) and the characters of a number of selected families.

**ZOOLOGY.**—General morphology of the animal, with special reference to a few selected examples, e.g., rabbit, dogfish, etc. Physiology of animals: respiration, absorption, digestion and elaboration of food materials; enzymes and hormones.

**BIOCHEMISTRY.**—Chemical structure of human tissues (e.g., bone, muscle, blood). Hormones, vitamins and enzymes, their location and action, and diseases caused by deficiency. Human physiology, location and functions of the principal human organs, action of medicaments in the treatment of infections and diseases.

**INTRODUCTION TO BACTERIOLOGY.**—A course on the biology of bacteria, the preparation of culture media, staining, etc., to provide students with a basis for more advanced work in the pharmaceutics course.

**Assistants' Examination.**—A registered student who has passed the First Professional examination and who has completed his period of apprenticeship may enter for an examination for the qualification of Assistant to Pharmaceutical Chemist. This entitles the holder to carry out the duties of a pharmaceutical chemist in the temporary absence of one such but does not entitle him to conduct open shop.

**Membership.**—A person whose name is entered on the Register of Pharmaceutical Chemists may use the suffix L.P.S.I. He may apply for membership of the Society (M.P.S.I.) and on election pays an annual subscription of £3 3s.

**Fees.**—Preliminary registration, £4 4s.; Science course, £45; First Professional examination, £6 6s.; Pharmacy course, £45; Second Professional examination, £6 6s.; Assistants' examination, £3 3s.; Assistants' registration, £2 2s.; Licence registration, £10 10s.

A student registered prior to July 31, 1952, may elect to follow the regulations which were in force up to that date. If such a student has not passed the Licence examination during an interim period of six years, he will be obliged to conform to the regulations summarised above. The Licence examination is conducted in two parts (corresponding to the First and Second Professional examinations). Part 1 consists of chemistry, botany and biology; part 2 of pharmaceutics, pharmacognosy, compounding and dispensing, forensic pharmacy. A candidate may not take part 2 until he has passed part 1. A candidate who fails part 1 may enter for re-examination at intervals of three months. A candidate who fails part 2 may enter for re-examination at intervals of six months. The fee for either part is £6 6s. ,

### Medicine

THE registration body for medical practitioners in the United Kingdom is the General Medical Council, 44 Hallam Street, London, W.1. There are a number of examining bodies, and when a student has passed the final examination of one of these bodies he is entitled to provisional registration as a medical practitioner. In order to obtain full registration he must thereafter

render satisfactory service for twelve months in appropriate resident appointments in approved hospitals or institutions. Study occupies a minimum of five years after passing a recognised examination in general education and in chemistry, physics and biology.

The principal universities in the U.K. confer degrees in medicine and surgery (M.B., Ch.B. or equivalent). Other examining bodies whose qualifications confer a title to registration are:—

**THE ROYAL COLLEGE OF PHYSICIANS OF LONDON** and **THE ROYAL COLLEGE OF SURGEONS OF ENGLAND**, particulars from the Secretary, Examining Board in England, Examination Hall, 8 Queen Square, London, W.C.1.

**THE SOCIETY OF APOTHECARIES OF LONDON**, particulars are obtainable from the Registrar, Apothecaries' Hall, Black Friars Lane, Queen Victoria Street, London, E.C.4.

**THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH** and **THE ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW**, particulars are obtainable from the Secretary, Scottish Conjoint Board, 18 Nicholson Street, Edinburgh.

### Dentistry

THE practice of dentistry is restricted by Act of Parliament to persons registered in the dentists register or under the Medical Acts, but the provision of general dental services under the National Health Service Acts is confined only to persons registered in the dentists register. Possession of a degree or licence in dental surgery granted by a university or other licensing corporation in Great Britain or Ireland carries with it the right to registration in the dentists register kept by the General Dental Council, 44 Hallam Street, London, W.1. Degrees and/or licences in dental surgery are granted by all universities except Aberdeen, Cambridge, Nottingham, Oxford, Reading, Southampton and Wales and licences are granted by:—**ROYAL COLLEGE OF SURGEONS OF ENGLAND**, Lincoln's Inn Fields, London, W.C.2; **ROYAL COLLEGE OF SURGEONS OF EDINBURGH**, 18 Nicholson Street, Edinburgh, 8; **ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW**, 242 St. Vincent Street, Glasgow; **ROYAL COLLEGE OF SURGEONS IN IRELAND**, St. Stephen's Green, Dublin.

The course usually extends over five years (including a year devoted to chemistry, physics and biology).

Registration in the Republic of Ireland is in the hands of the Dental Board, 57 Merrion Square, Dublin.

### Optics

THERE are five examining bodies concerned with the career of ophthalmic opticians: The Worshipful Company of Spectacle Makers, the British Optical Association, the National Association of Opticians, the Scottish Association of Opticians, and the Institute of Optical Science. Full-time courses for the examinations generally last three years and part-time five years (four years part-time followed by one year full-time).

### Chiropody

To gain admission to the National Register of Medical Auxiliary Services, it is necessary to pass the examination of the Society of Chiropodists, 8 Wimpole Street, London, W.1.

### P.D.A. Examinations

THE examinations of the Photographic Dealers' Association have for their object the raising of the standard of efficiency of assistants, both in practical photography and salesmanship as applied to the business of the photographic dealer. The examinations, which can be taken by retail photographic dealers and assistants, will comprise intermediate and advanced grades. In the intermediate examination, candidates will be required to give written and oral answers to the questions set on such subjects as simple cameras, accessories, sensitised materials, chemicals, etc. All successful candidates in the intermediate examination receive a certificate. In the advanced examination, which is divided into two parts, Part I, general, and Part II, cine, candidates obtain a diploma for

passing either part. That examination is open only to those who have passed the intermediate, and comprehensive knowledge must be shown in the following subjects:—General—miniature cameras, processing, enlarging, colour and cine photography, etc., to a more advanced standard; cine — principles of amateur cinematography, sensitometry, films and processing, exposure, cameras and projectors, etc.

The examinations which consist of three parts, written, oral and practical, are restricted to those engaged in retail photographic dealing, and the examination is designed, in each of its three parts, to test the merit of candidates from the standpoint of retail photography. The written paper calls for a sufficient standard of knowledge for the candidate to be able to give satisfactory and reliable technical advice to a customer. The practical test is primarily one of the technical ability in using everyday photographic materials correctly. The oral examination provides the opportunity for the candidate to demonstrate his abilities as a photographic dealer's assistant.

Holders of the P.D.A. diploma become automatically eligible for associate membership of the Association on application, and if and when they open an approved retail shop, are automatically entitled to full membership of the P.D.A.

The examinations take place in London, Manchester, Dublin and a suitable centre in Scotland. The entrance fees are:—Intermediate examination, £2 2s.; advanced examination, £3 3s.

Candidates must pass in all three parts of the examination, but in the intermediate examination a candidate who fails in any one section may re-enter subsequently and within two years for that section only. If the section failed is the practical only, a candidate may submit further samples of his practical work after a period of six months from the date of the examination. In the advanced examination, a candidate who fails in the practical section only, may re-enter for that section only. Details of the syllabus may be obtained from the general secretary of the Association, P.D.A. House, 46 Bloomsbury Street, London, W.C.1.

## BUSINESS TRAINING as a subject for the pharmaceutical curriculum

### A PLEA FOR ITS INCLUSION

By A. A. P. TOHER, M.C.P.S.I.

**B**USINESS training for pharmacists is a specialised subject of interest only to those in retail practice. There is a strong tendency in some pharmaceutical circles to regard trade as an activity unworthy of an intellectual and scientific outlook, but in fact a scientific approach to the pharmaceutical trade is not only rewarding but vitally necessary. The tendency towards governmental interference with trade, increased rates, taxes and overheads make it obvious that future trading conditions will become increasingly less favourable. Hit-or-miss business methods may have sufficed in the past, but the conditions of today call for highly efficient management and marketing. The challenge of intense competition from grocers, hardware and seed merchants and hairdressers, to say nothing of other pharmacies, can only be successfully met by studying modern business methods.

### Profession and Trade

The relationship of profession to trade in pharmaceutical practice was thoroughly investigated during the recent High Court and Supreme Court actions in Dublin between the Pharmaceutical Society of Ireland and the Fair Trade Commission. It was clearly established, *inter alia*, that retail pharmacists in Ireland were engaged in both a profession and a trade, and that professional activities (i.e. dispensing) were, in effect, subsidised by trading activities. The importance of the purely commercial aspect having thus been made clear, it will hardly be disputed that some form of business training is necessary. If, in certain circumstances, the profession depends for its continued existence upon the prosecution of trade, can a pharmacist be said to be properly educated if he lacks the essential business training?

The psychological problem of reconciling two entirely different outlooks—the professional and the commercial—should be faced in the colleges of pharmacy, and the student should be encouraged to approach business from an academic viewpoint.

The scope and details of any proposed course in business

training would require study in the light of special circumstances, but the following headings would appear to cover the subject fairly thoroughly:—commercial arithmetic; correspondence; business stationery; writing reports and précis; filing and indexing; invoices; systems of accounts; book-keeping; the essential books; trading accounts; profit and loss accounts; balance sheets; banking; cheques; loans; mortgages; assurance; insurance; income tax; statistics; stock control; opening a business; sales promotion; shop and window display; and salesmanship.

Advertising is omitted as being liable to lead, in Great Britain, to conflict with ethical standards agreed upon and accepted by the profession as a whole.

The course would not require to be as detailed and broad as the commercial courses available elsewhere, but would be tailored to meet the specific requirements of pharmacists, and thus free from the usual drawback of such courses, namely unnecessary inflation of the syllabus for the sake of prestige.

In order to run any business efficiently, accurate and up-to-date information must be readily available. To provide such information, a knowledge is required of simple book-keeping, general principles of balance sheets, trading accounts, profit and loss accounts, and statistics. Stock control is at the heart of a business system, and a description of what it means, and its advantages, would be a valuable part of the course. Banking, cheques, loans, mortgages, income tax, assurance and insurance are subjects of which every businessman should have a clear picture; likewise commercial arithmetic, correspondence, filing and indexing.

Objection may be raised that adequate treatment of all those subjects would call for a prolonged course. On the contrary, the course need only be of an introductory nature stressing basic principles and indicating the way to further progress.

Careful consideration would have to be given to the question who should provide the course and where. It might be thought that the courses already provided by the

technical colleges would be suitable, and that students should be recommended to go there for instruction during apprenticeship. There are at least two grave objections to that method:—(i) Those courses are already too long and too detailed for the heavily burdened pharmacy student; (ii) a voluntary course not followed by an examination produces poor results. Some of the correspondence courses in commercial subjects are excellent, but here also the aspect of voluntary spare-time effort arises. The subject is too important to be treated in that way.

It has been suggested that one of the purposes of apprenticeship is to provide business training. Few pharmacists would claim the ability to give an apprentice systematic training in modern business methods. Is it reasonable to expect a new and dynamic approach towards business technique from those trained at a time when training in the subject was considered unnecessary? The most efficient approach is to incorporate such a course in the regular pharmaceutical curriculum, the first duty of the colleges of pharmacy being to provide adequate and

up-to-date instruction. The course would have to be optional, since many students would have little or no interest in trade. An examination would, however, be essential so as to provide an incentive. Assistance in finalising the details of the syllabus could be obtained from principals of technical colleges, who might also be able to offer the services of part-time lecturers. In subjects like stock control, display and banking, qualified lecturers could quite easily be obtained from the professions concerned.

Powerful competing interests now handle many lines formerly confined to the chemist. If he is to meet that competition, and survive it, he must devote to business management the same qualities of intellect and energy now applied to professional subjects. The responsibility for providing the educational requirements of the pharmacist is the *raison d'être* of the Pharmaceutical Societies. It is vitally important that a course in business training should be provided and that it should become a normal part of the curriculum.

## A FILM ON ASEPTIC TECHNIQUE

How the Pharmaceutical Society's Films Committee evolved and produced a film  
“tailor made” for pharmaceutical teachers and students

By P. J. WHITE, M.P.S.

(Chairman, Films Committee of the Pharmaceutical Society)

**W**HETHER teaching films are made for pharmacists, doctors or schoolchildren, the development of the film—as opposed to the technical construction involved in shooting, editing and recording—almost inevitably follows a standard pattern. The process always takes far longer and costs more in time and money than the man in the street would believe possible.

The films on elementary bacteriology made for the Pharmaceutical Society serve as an excellent example of the problems that are met with in designing films that will be of real use to the practising teacher. They are, in fact, the first to be designed and produced by a professional body for the use of its students.

As long ago as June 1952, a questionnaire was sent by the Society's Films Committee to the heads of schools of pharmacy asking them to suggest subjects for which teaching films were required. A far higher proportion of replies was received than is usual. Most of the schools used both films and film-strips, and many useful suggestions were made as to the type of films required. The subject for which a film was asked for most often was aseptic dispensing.

### Preparation of the Treatment

The Committee therefore adopted that subject, and sought the views of two of the leading authorities upon it. With their comments in mind a teacher at one of the schools of pharmacy then prepared a treatment—that is, a rough outline of a film with an indication of the main points to be emphasised. The treatment was discussed in committee, revised, shown to other teachers, and revised again.

As a result of those discussions and revisions, which lasted a year, the original treatment, which covered a few pages of foolscap, had swollen considerably. It was obvious that the original idea of a simple film on aseptic dispensing had developed into an epic. It consisted of five sections each of which was subdivided into anything from three to eight subsections. Any one of those subsections provided enough material for a single short film. After a great deal of discussion it was decided to abandon the original project, and to make a series of short films and film-strips suitable for showing in the classroom. Several members of the Committee each took a single section under his wing and undertook to ask a specialist in that particular field for his advice.

Help was given to the Committee by men and women, both inside and outside pharmacy, who were eminent in their field. While all that was going on an even more important question was constantly before the Committee. Whom should they approach to act as a sponsor? The sponsor is the man who provides the money, and normally the man who pays the piper calls the tune. But the Committee was undertaking something revolutionary in film production. It had set itself the task of finding out exactly what the teachers needed and then getting the film made the way they wanted it. The Committee had, in effect, to go to a possible sponsor and say: “We want you to pay to have a film made, but we must say what sort of a film it is to be, both in content and style.” It was not surprising that several approaches were made both to individual manufacturers and to the pharmaceutical industry as a whole without any concrete results. Part of the trouble lay in the fact that it is difficult for anyone who is not familiar with the medium to visualise how a film will look merely by reading a treatment.

That obstacle, which at one time appeared insurmountable, was overcome by Dr. Brian Stanford, who has for many years specialised in the production of medical films, and attends the Committee as observer for the Medical Committee of the Scientific Film Association. At one of the Committee's meetings a subject expert had been called in to advise them. After the meeting Dr. Stanford took the expert on one side and said: “You know how to do the job. The equipment is portable. Push it all into the back of your car and bring it down to my studio, and we'll shoot the film over the week-end.” When the question of expense was tentatively mentioned he replied: “We'll shoot the film first and worry about the money afterwards.”

At the next committee meeting the rough assembly of the film was shown and approved. The film served its purpose as an example of what the Committee was trying to do. Two sponsors came forward, one of whom paid for the development and final polishing of the “try-out,” which became the first film of the series. The other financed the production of four related films in the same section.

Two films that fitted into the scheme were already in existence. One was “How to Inoculate a Plate,” made at St. Mary's Hospital, and the Council of the Pharmaceutical Society authorised the purchase of a copy for the film

library. The other was a Swiss film dealing with the effect of bacteriostats on *E. coli*. It was the property of a manufacturing company, which not only presented to the Society a copy of the film, but also paid to have an English sound commentary recorded. The Films Committee owes a great debt to those industrial firms which co-operated so generously. Not only have the sponsors paid to have the films produced, but they have made copies available to pharmaceutical bodies abroad, who see in them an opportunity of helping their own students.

In the early part of 1955, another circular letter was sent to the schools of pharmacy, this time telling them that the first films were complete and asking if the teaching staff would comment on the techniques demonstrated and the value of the films as a classroom instrument. All the schools agreed to view the films, and the teachers' comments were valuable.

Perhaps the most interesting aspect of the criticisms made was that they paralleled closely the reactions of any experienced teacher—whatever his subject—to the use of films in the classroom. First, that the film can be a useful aid and a stimulus, but is not a substitute for personal demonstration and explanation. Many teachers, indeed, believe the student should be taught a subject before he sees a film about it. Some of the critics felt that it was wrong to attempt to film a practical technique which can be demonstrated on the lecture bench. A number of experiments have been made to determine the value of films for that purpose. The general opinion seems to be that, where the live demonstration is reinforced by a filmic one, the students put up a better performance. A film can be edited to eliminate unimportant movements, and in that way the attention is concentrated on essentials. Some of the pharmacy teachers pointed out the value of the "close-up" which "puts every student in the front row."

It is inevitable that there should be some divergence of opinion about the details of the techniques to be taught. That is one of the great weaknesses of the teaching film. The ideal solution is for every teacher to have a film made to his own specification. As this is not possible the only alternative is the one followed by the Films Committee: to consult as many experts as possible when drafting the treatment, and to invite the comments of the teachers before the film is made.

The film producer was careful to repeat each procedure several times. Some of the pharmacists thought that was bad teaching technique, and that however many times an operation was shown, students would make mistakes when they did it themselves.

Films are used most effectively when their special advantages are recognised. Cinephotomicrography, combined with time-lapse and interference microscope techniques, have been used to show the splitting and recombination of chromosomes in mitosis. It would be impossible to see those phenomena in any other way. The use of high-speed cameras enables the student to study movement too quick for the eye to follow. Time and space are annihilated; drugs can be shown being gathered at any season of the year in any part of the world, and manufacturing processes can be compared with laboratory techniques. Where special skills are involved, beyond the powers of the demonstrator, the expert can be brought into the classroom. Those experiments which require a rapidly changing viewpoint if they are to be seen most clearly lend themselves to cinematic exposition.

Films can only be effective if used at just the right time. Availability is a key point in medical illustration, and only when each university has a library of the films its teachers need will full use be made of films as a medium of instruction. In these days of rapid electronic development, the time may come when every student has a television set on which, by dialling an appropriately modified Dewey number, he may see any film he wishes on the subject of his choice.

When Oxo, Ltd., London, made public reference to the films on elementary bacteriology sponsored by them for the

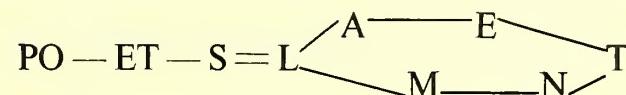
Society's film library, more than 180 requests were received for the loan of the film. The requests came from medical schools, university bacteriological departments, agricultural and dairying institutions, the Armed Forces, branches of the Institute of Medical Laboratory Technicians, and manufacturing companies with bacteriological control laboratories. The British Council has ordered sets of the five films produced at the request of the Committee and has presented them to schools of pharmacy and medicine overseas. Sets have been sent to India, New Zealand and Japan. The New York office of the Central Office of Information has shown the films to schools of pharmacy in America. Each film bears a title which mentions that it was produced for the Pharmaceutical Society of Great Britain, and their wide distribution enhances the prestige of the Society as an enterprising body, willing to experiment with modern methods of education.

## NEW FILM

### The Home Confinement

Black and white sound. 20 minutes. 16-mm.

MADE IN Great Britain this year with the advice and co-operation of the Royal College of Midwives and the Health Department of the Hertfordshire County Council, this film has been produced primarily for the instruction of pupil midwives under training for district work as domiciliary midwives. It was sponsored by Ciba Laboratories, Ltd., Horsham, Sussex. The film shows the antenatal visit of the midwife to the patient's home, describes the best layout of the room for the prospective home confinement, and shows the articles the patient should provide. The midwife's preparations for the confinement are illustrated, though the technique of delivery, which it is presumed the pupil knows, is not included. The film ends on the note that the midwife will continue to care for both mother and baby during the lying-in period. Copies are available on loan, free of charge, from the Gaumont British Film Library, Industrial Department, Aintree Road, Perivale, Greenford, Middlesex.



By J. J. HAYTON

*D*ESCRIBPTIONS academical  
Or drugs entirely chemical  
Are products of this age of the synthetic,  
And while we're not concealing  
That there's great advance in healing  
We think it strikes a blow at the poetic.

For how can we wax lyrical  
On formulas empirical  
Or tempt the muse with "alcohol" and "ester"?  
Did the Countess of Cinchona  
Think her name would come the owner  
Of a string of symbols, from the drug that blessed her?  
With processes botanical  
Replaced by those mechanical  
Our loss the chemist doesn't give a damn for,  
No ancient Chinese palaces  
Form part of his analysis  
—C ten H sixteen O—so much for camphor!

The beautiful "Calumba,"  
"Coriander,"—a back number?  
Their clear-cut names, as cures, enhanced their strength!  
But modern preparations  
Like visiting relations  
All vie with each other in their length!  
And even if we stammer  
Through each mono-, tri-, and gamma,  
And from the turgid mess a verse would syphon;  
Di-, acetate, and lactic all  
Have rhymes, but what's not practical  
Is finding something rhyming with the hyphen!

**Counter Packs  
at  
dispensing prices**

*Rx ZINC + CASTOR OIL B.P.  
1953*

Mitte 3½ WF JAR FITTED SEPIA  
DOUBLE SHELL SCREW CAP  
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GRADE MATERIAL HOMOGENISED  
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# The CHEMIST AND DRUGGIST

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## Pharmacy in the Forces

So far as it affects pharmacy, the Second Report of the Forces Medical and Dental Services Committee is a vague and confused document (see p. 55).

The Committee readily admits that the Service "trades"—as it calls them—including pharmacy, have failed to keep abreast of outside practice, but its proposals for improving matters are, to say the least, dubious. First, it rejects the radical plan put forward by the Pharmaceutical Society that pharmacy should be regarded as a distinct branch of the medical service, and prefers to tinker with the problem. Perhaps that is all that can be expected of a Committee that describes the backwardness of Service pharmacy as "regrettable"; to others, scandalous would seem the more appropriate description, and root and branch treatment the obvious cure.

The Committee insists that the system of Service training should be revised so as to provide that the staff concerned could and normally did, obtain the appropriate civil qualification. But so far as pharmacy is concerned, the Committee is apparently prepared to relax that insistence for in the event of the Statutory body responsible for pharmaceutical training in Great Britain (the Pharmaceutical Society) refusing to approve of the training provided by the Services, the Committee makes the astounding suggestion that a new Service classification of "pharmacist" will have to be introduced. But the Services are, it is to be hoped, still subject to the Law, and by Law a pharmacist is a person who conforms to the educational requirements laid down by the Pharmaceutical Society.

The Committee states that its one primary object was to provide the Services with ". . . specialised and technical staffs . . . properly qualified. . . ." Surely, therefore, to attain that expressed object, the Committee ought to have laid it down that it was for the Services to conform, at least, to requirements of the Pharmaceutical Society for its pharmaceutical staffs; to do otherwise, as it apparently has done, would be to negate its own express aim.

Whoever has the task of implementing the Committee's proposals will have no easy task, for the report is not exactly a crystal clear document. Thus, in one paragraph, it recommends that in the Navy, promotion prospects for specialised and technical staffs should be improved along the lines recommended for the Army and Air Force; while in another paragraph it recommends that there should be more extended use of

"qualified pharmacists" in the Army and Air Force, preferably on the lines adopted by the Navy!

It may be that someone will be able to translate the proposals contained in the report into a plan for Service pharmacy; but even if that can be done it will not be a plan capable of providing a pharmaceutical organisation equal to that that obtains in Civil life.

## Bloomsbury to Brunswick

THE change from the Pharmaceutical Society's School of Pharmacy to the School of Pharmacy, University of London, is something far more fundamental and far-reaching than a mere shifting of location. The Society's school no longer exists, and what used to be the Society's school, though it teaches pharmacy, no longer trains students for the Society's examinations. Furthermore, what used to be the Society's school is now the only university school in Britain providing a degree course in pharmacy which does not also offer a course for the Society's examination.

Brunswick Square is a school for the specialist; its products will enjoy unrivalled prestige in industrial pharmacy; but there appears to be no place in the School for what is purported still to be the Society's main educational policy—training pharmacists for general practice. It is in the Statutory position of the retail chemist that the Society finds its main *raison d'être*. But there appears to be no point in a student who has had the type of pharmaceutical education provided by Brunswick Square, taking the Society's Qualifying examination, with its main objective the right to "keep open shop."

Certainly there is something unique afoot in Brunswick Square—it almost amounts to the creation of a new profession of "industrial pharmacy"; and certainly as a means of fostering the prestige of our more brilliant—and perhaps more fortunate—pharmaceutical students, it is to be commended and encouraged.

The danger will lie in other schools, which at present offer courses for the Society's examinations, following its lead. Too many pharmacy graduates, at a time when there are already too few pharmacists, might threaten the Society's Statutory position.

## Highly Commended

How well served the Proprietary Articles Trade Association has been by its secretary, and the Fair Prices Defence Committee by its chairman (Mr. H. E. Chapman in both cases) is evidenced once again by the revised constitution which the P.A.T.A. council has just approved in principle (see p. 49) and which is being submitted for adoption (perhaps after modification) to a special general meeting of the Association later in the year. The new constitution, though it arises out of painful necessity occasioned by the Restrictive Trade Practices Act, promises to endow the Association with a new lease of valuable and active life. Drafted by the Association's solicitor, it was submitted to the council by Mr. Chapman with a memorandum in June. The prompt and timely action of the secretary is distinctly in line with the imaginative devotion he has always given to Fair Trade interests. It is perhaps not too much to claim that his well-aimed efforts have been a telling factor in securing the unequivocal pronouncement from the Government on assisting manufacturers under the Act (see p. 52).

# PHARMACEUTICAL SOCIETY OF IRELAND

## Monthly meeting of Council

AT the monthly meeting of the Council of the Pharmaceutical Society of Ireland held in Dublin on July 10, Mr. P. F. McGrath (president) was in the chair. Also present were Messrs. M. Power (vice-president), H. P. Corrigan (treasurer), G. C. O'Neill, J. Gleeson, P. A. Brady, A. A. Toher, F. Loughman, J. J. O'Regan, M. Costello, T. C. Scott, D. J. Kennelly, F. J. Robinson, and J. P. Kissane. Mr. James G. Coleman, B.L. (registrar), was in attendance. Apologies for absence were received from Messrs. T. B. O'Sullivan, V. McIlwee, N. A. McKane, and C. J. Cremen.

A letter was read from Dr. Michael Tierney (president, University College, Dublin) thanking the Council for their expression of sympathy with him and his family on the death of his daughter.

A letter was read from the Department of Health replying to a query addressed to the Council by a member who stated that following the supply of barbiturates on a prescription issued under the Health Acts, he was obliged to send the prescription to the county council for payment. How was he to observe the Barbiturate Regulations, since they stipulated that a barbiturate prescription should be retained for two years? The letter from the Department stated that the supply in that manner of a preparation coming within the scope of a local authority was a transaction to which the provisions of Article 4 of the Regulations did not apply. THE REGISTRAR said that ruling did not apply to D.D.A. prescriptions. MR. GLEESON said there was a clause in the Barbiturates Regulations that was not in the Dangerous Drugs Act.

### *International Pharmaceutical Federation*

A letter was read from Dr. J. W. Birza (secretary-general, International Pharmaceutical Federation, Amsterdam) requesting an increase in the present affiliation fee paid by the Society from £16 to £50. MR. BRADY said a fee of £50 was too high. THE PRESIDENT agreed, but said there were decided advantages in being a member of such a body. MR. COSTELLO said that when attending the meeting of the Federation held in Brussels he had submitted that there was no objection to some increase in the fee, provided that the scope of the Federation was enlarged, and it became of more service to the members. His idea was that apart from being a purely scientific body there should be a central bureau dealing with legal and health matters, and from which members could get advice and assistance. He gave the Federation an outline of the difficulties his own Society was going through, and mentioned that the Federation should be able to help member bodies whose status was being attacked by the State in different countries. Sir Hugh Linstead, who gave a translation of what he had said, had indicated that the aspect he had put forward would be looked into, and it was subsequently decided to enlarge the Federation's Bureau. On the understanding that that would be done he undertook to recommend the Council to pay some increase in the fee. During the High Court proceedings all information and data they asked for had been sent, including material from Sweden and Holland. THE PRESIDENT said that since the Federation had widened the scope of activities to spheres which could be of value to the Society, he suggested that the subscription should be increased to £25. The Council agreed to the president's proposal.

Mrs. Josephine Crilly (née Collins), M.P.S.I., wrote submitting marriage certificate and requesting change of name in the Register. The application was granted.

The examiners to the First Professional examination reported that of the thirty-three candidates who sat for the examination two passed with first-class honours, five passed with second-class honours, and ten passed. The examiners

stated that the standard all round was good, and expressed themselves pleased with the course covered by the College staff.

THE PRESIDENT said that the decision reached at the last meeting to have some of their own professors act as examiners with the extern examiners had worked out very well in that case.

The reports of the House, Schools, and Law Committees were submitted and approved.

MR. P. O'BRIAIN (the Society's inspector) stated in his report that he had visited Co. Cork (excluding West Cork), Cork city, Co. Waterford and Co. Tipperary. In one Co. Cork town he had been asked to see the local doctor and seek his co-operation in enforcing the Barbiturate Regulations. The doctor had assured him of his assistance. Following a complaint that a co-operative society was retailing poisons Mr. O'Brien had interviewed the manager, who had promised to return the stocks of poisons, and discontinue the sales of such lines. During a week spent in Cork city Mr. O'Brien had visited all the pharmacies, and attended the annual meeting of the Cork County and City Chemists Association.

He received many complaints regarding the way in which drugs were dealt with in two of the large hospitals in Cork. Mr. O'Brien had received a complaint that the number of prescriptions received in Cork city since the introduction of the Health Act had gone down drastically. Details he had obtained had shown that in the central city pharmacies prescriptions were down by 13 per cent. in 1955 in one case and by 9 per cent. in another. In suburban pharmacies they were up by 20·5 per cent. in one case, and by 6 per cent. in another. Those figures would indicate that prescriptions were being dispensed in the suburbs rather than in the flat of the city. In County Limerick Mr. O'Brien had called upon a number of creameries reported to be selling poisons. THE PRESIDENT commented that the report was good and comprehensive. The Council decided to take action on several of the matters reported on by Mr. O'Brien.

On the report of the Certificates and Declarations Committee it was stated that sixty-one candidates had entered for Part I of the July Licence examination and forty-three for Part II. Five candidates had entered for the July Assistants' examination.

### *British Pharmaceutical Conference*

THE PRESIDENT, reporting on the work of the British Pharmaceutical Conference Committee, said that practically all arrangements had been finalised, thanks to the great amount of work done by the various subcommittees. In view of the large numbers who would be travelling on the conference excursion to County Wicklow it was arranged that a number of hotels would supply lunch, as one hotel would be unable to deal with the large numbers to be catered for. Seating accommodation at the Banquet could be provided for up to 900 as a maximum, but a greater number could be taken for the dance on the closing night. It was hoped that there would be a good attendance of the home pharmacists at the dance, particularly those who were unable to be present during the week. It was important that Irish chemists who intended to be present either at the banquet or the dance should make application without delay as the lists would have to be closed shortly. MR. POWER said that the Committee would have to fix a date after which no further applications could be entertained. He appealed to all members who intended coming to the Conference meeting to let the Committee know in good time.

(to be concluded)

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These products are being specially detailed by all our representatives and extensively advertised in all the medical journals.

### COLLUBARB TABLETS—

*for rapid relief in dyspepsia, hyperchlorhydria and peptic ulcer.*

EACH TABLET CONTAINS		TRADE PRICE
ALUMINIUM HYDROXIDE	gr. 5	Presented in cartons of 24 2/3 each
PHENOBARBITONE	gr. 1/4	cartons of 100 5/- "
ATROPINE SULPHATE	gr. 1/500	alcons of 500 17/3 "

### ERGO-RONDASE—*an intramuscular*

*preparation to reduce the risk of post-partum haemorrhage.*

		TRADE PRICE
HYALURONIDASE-EVANS	Presented in dual packs containing	
330 I.U. WITH	1 vial of each component	3/4 each
INJ. ERGOMETRINE MALEATE.	and in boxes containing	
B.P., 0.5 mg.	six vials of each component	18/6 "

### NOBECUTANE—

*the sterile plastic spray-dressing. An effective replacement for conventional dressings.*

		TRADE PRICE
NOW IN 100 ml.	Presented in spray containers of 100 ml.	15/6 each
SPRAY PACK FOR THE	and 300 ml. 24/- "	
GENERAL PRACTITIONER.	bottles of 50 ml.	7/4 "

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*Presented in R.C.B. containing 1000 i.u.  
Hyaluronidase Evans*

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Boxes of 6 R.C.B.	14/- each	
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JULY 11, 1956

BRITISH MEDICAL JOURNAL



## Nutrition problem

If children had their own way, some strange diets would emerge. Most children are food-faddists with likes and dislikes that frequently lead to impaired nutrition. Insurance against such nutritional problems is adequately provided by a daily dose of the newly introduced Vi-MAGNA SYRUP—specially formulated to correct inadequate intake or utilization of dietary vitamins. Its delicate orange flavour will appeal particularly to the food-faddist child, who can derive all the vitamins essential for nutritional well-being from ONE TEASPOONFUL DAILY.

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BRAND OF MULTIVITAMINS Lederle  
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Each teaspoonful contains:

Vitamin A	5000 I.U.	Ascorbic Acid (C)	25 mg.
Vitamin D	500 I.U.	Cysteineamide	1 mg.
Thiamine HCl (B <sub>1</sub> )	3 mg.	Calcium pantothenate	5 mcm.
Riboflavin (B <sub>2</sub> ) HCl	2 mg.	Vitamin B <sub>12</sub>	as present in concentrated extractives
Pyridoxine (B <sub>6</sub> ) HCl	0.2 mg.	from streptomyces fermentation	5 mg.

\* Regd. Trade-Mark  
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Lederle products are consistently being promoted to doctors in medical journals throughout the world. The above advertisement is currently appearing in leading British medical journals. Literature on the products referred to is available to pharmacists on request.

## TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, JULY 18: Supplies of many CRUDE DRUGS are now extremely scarce on the spot. With the high prices asked at origin during the past few months, there has been little encouragement for importers to bring in supplies on speculation. Those prices continue to be held firm in many instances.

New-crop LOBELIA HERB provided an interesting feature during the week, when the shipment rate for American material was almost doubled at 10s. 6d. per lb. The forecast is that the value of the crop will again reach the peak achieved by the 1955 crop. A report from India says that there was rainfall a fortnight ago in the interior, which has proved beneficial for the SENNA crop. Whilst the present crop is now expected to be a good one, prices continue firm. Shipments of senna from Tuticorin during June were:—

	U.K.	U.S.	EUROPE
SENNA	Tons	Tons	Tons
LEAVES	11	62	49
PODS	1	—	13

MYRRH (selected sorts) and STYRAX are unobtainable on the spot, and quotations from origin are considered exceptionally high. TURMERIC was easier on the spot. Several types of BEESWAX were dearer. PERU BALSAM has become scarce on the spot, while shipment offers were not forthcoming; the same position obtains for CANADA BALSAM. Inquiry for CASCARILLA quills found the market bare. PEPPER was in demand, and prices were generally firmer.

The Board of Trade has announced its intention to dispose of some of its stockpile of SHELLAC and MERCURY. The amounts mentioned were 1,000 tons of shellac (to be disposed of over a period of possibly a year) and 1,000 flasks of mercury. The ex-warehouse price of mercury now stands at £85 per flask against £86 recently.

In ESSENTIAL OILS, the high rates ruling for NUTMEGS has made the oil difficult to find, and most holders are reserving their supplies for their regular customers. LEMONGRASS was sixpence per lb. lower on the spot, whereas Chinese PEPPERMINT was reduced by 1s. 6d. and Brazilian by threepence.

Among PHARMACEUTICAL CHEMICALS the only change announced by the manufacturers was a reduction for THYMOL. Apart from the increases in prices of ALCOHOLS mentioned in last week's report, ACETIC ACID and various INDUSTRIAL SOLVENTS were all upgraded by amounts ranging from £6 to £14 per ton. The amended prices will be given in a later report. Dyes and colours were also raised by about 5 per cent.

### Pharmaceutical Chemicals

ACETIC ANHYDRIDE.—Dearer. 10-ton lots are now quoted at £130 per ton, delivered J.K. in returnable drums.

ADRENALINE.—Rates for synthetic B.P. from 1s. 3d. (500-gm. lots) to 1s. 9d. (10 gm.) per gm. and ACID TARTRATE, B.P., from 10d. to 1s. 2d.

AMMONIUM ACETATE.—1-cwt. lots of B.P.C. are quoted at 3s. 9d. per lb.

BORAX.—Prices for B.P. grade for quantities of 1 ton and upwards, are as follows:—Granular, £50; crystals, £52 10s.; powder, £53 10s.; extra fine powder, £54 10s. per ton. Prices of commercial range from £40 to £45 10s. per ton, as to type and packing. Dehydrated borax, is £61 10s. per ton, in paper-lined hessian bags or £60 10s. in paper bags; carriage paid in Great Britain. Usual surcharges for smaller quantities.

BORIC ACID.—Prices for B.P. grade in quantities of 1 ton and upwards are as follows:—Granular, £83; crystal, £90; powder, £87 10s.; extra-fine powder, £89 10s. per ton, in 1-cwt. lined hessian bags carriage paid in Great Britain. Surcharges for smaller quantities: Less than 1 ton but not less than 5 cwt., 1s. per cwt., 3 cwt., 2s.; 1 cwt., 3s.

BROMIDES.—POTASSIUM, B.P., crystals in 5-cwt. lots are 2s. 11½d. per lb.; 1-cwt., 3s. 0½d. per lb. Powder is 1½d. per lb. more. AMMONIUM is 3s. 1d. per lb. in 5-cwt. lots and SODIUM, 2s. 10d. per lb.

CALCIUM SUCCINATE.—Quotations are from 10s. 6d. to 12s. 6d. per lb., as to quantity. SUCCINIC ACID is from 10s. 6d. to 12s. 3d. per lb.

CARBROMAL.—B.P.C. is 21s. per lb. delivered in returnable packing.

CHLOROXYLENOL.—B.P. quality is 5s. 9d. per lb. for 1-cwt. lots, and 5s. 7d. for 10-cwt.

CITRATES.—Rates (per lb.) are as follows:—POTASSIUM, 1-cwt. lots, 3s. 10½d.; 28-lb., 4s. 10d.; SODIUM, 1-cwt., 3s. 3½d.; 28-lb., 4s. 1½d. (powder of both salts twopence more). IRON AND AMMONIUM, 1-cwt. lots, granulated, 4s. 2½d.; 28-lb., 5s. 3d. Scales are 9d. per lb. above the granulated.

CITRIC ACID.—Quotations (per cwt.) for domestic material are 205s. for 1-4 cwt. lots and 200s. for 5-cwt. lots.

CREOSOTE.—B.P. quality ex beechwood, is from 6s. 9d. to 7s. 6d. per lb.

DEXTOSE.—Rates are as follows:—MONOHYDRATE, B.P., 1-lb., 1s. 11½d.; 7-lb., 11s. 10d.; 28-lb., 43s.; free packages, less 12½ per cent. to wholesalers. In bulk, 1-ton lots, £90 ex works. ANHYDROUS, B.P., 7-lb., 14s.; 14-lb., 26s. 3d.; 28-lb., 49s. (terms as for monohydrate). 1-ton lots, £107 10s. ex warehouse.

ERGOTOXINE ETHANESULPHONATE.—Price per gm. for B.P.C. (1949) is: 1 gm., 168s. 9d.; 10 gm., 155s. 3d.

ETHER.—Prices (per lb.) in winchesters are as follows:—TECHNICAL, B.S.S., and SOLVENT, 5-cwt., 2s. 5d.; 10-cwt., 2s. 4d. ANESTHETIC, B.P., 5-cwt., 3s. 10d.; 10-cwt., 3s. 9d. In drums prices are 4d. per lb. less than above.

FERROUS GLUCONATE.—B.P.C. is 6s. 6d. per lb. in 1-cwt. lots.

HEXAMINE.—B.P. is 1s. 11½d. per lb. for 1-ton lots, delivered in 1-cwt. kegs (1s. 11d. in paper bags). Technical is one penny per lb. under those rates.

IODOFORM.—Powder is 26s. 1d. per lb. in 1-cwt. lots and crystals, 28s. 9d.

ISONIAZID.—In 5-kilo lots the price is about 140s. per kilo.

MAGNESIUM HYDROXIDE.—Makers' prices for B.P.C. are, 1-cwt. lots, 3s. 5d. per lb. and 1-ton, 3s. 2d. per lb.

MAGNESIUM OXIDE, B.P.—Bulk rates are as follows:—LIGHT, 3s. 3d. per lb., and HEAVY, 5s. 10d. per lb.

MAGNESIUM PEROXIDE.—Price (per lb.) for 1-cwt. lots of B.P.C. (15 per cent.) is 3s. 11d.

MERCURY DERIVATIVES.—Quotations (per kilo) for 50-kilo lots are as follows:—AMMONIATED, B.P., lump or powder, 60s.; PERCHLORIDE, B.P., powder, 53s. 6d. and lump, 54s.; SUBCHLORIDE (calomel) B.P., 61s. 9d.; OXIDES, B.P.C., levigated or yellow, B.P., 65s. 6d.

PHOSPHORIC ACID.—B.P. (s.g. 1.750) is quoted at 1s. 4d. per lb. in 10-carboy lots, 1-2 carboys, 1s. 8d. per lb. B.P. 1914 is quoted from 1s. 2d. to 1s. 6d. per lb. HYPOPHOSPHOROUS, B.P.C., in winchesters is from 5s. 9d. to 6s. 10½d. per lb., as to quantity.

POTASH SULPHURATED.—B.P.C. Lump is 2s. 3d. per lb. for 1-cwt. lots.

POTASSIUM BICARBONATE.—B.P. powder is 110s. per cwt. for 1-4-cwt. lots and 10s. per cwt. for 5-cwt. and over.

SALICIN.—Price quoted is 18s. 6d. per oz.

SALOL.—Quotations for B.P.C. are about 9s. per lb. for 1-cwt. lots.

SODIUM ACETATE.—B.P.C. in 1-cwt. lots is 1s. 8d. per lb.

SODIUM CARBONATE.—B.P. exsiccated is 60s. 6d. per cwt.

SODIUM PERBORATE.—Prices (per cwt.) are 145s. 9d. in 1-cwt. kegs; 138s. 3d. in 1-cwt. bags for B.P.C. (minimum 10 per cent. available oxygen). Other strengths pro rata. The PERBORATE MONOHYDRATE testing 15 per cent. available oxygen is 309s. 9d. per cwt.

SODIUM PERCARBONATE.—Prices (per cwt.) about 166s. 9d. (bags, 7s. 6d. lower) for minimum 12½ per cent. available oxygen.

THYMOL.—Lower. In 7-lb. lots the price is 15s. 9d. per lb.; 28 lb., 14s. 6d.

### Crude Drugs

ACONITE.—Spot supplies of Spanish *napellus* are 3s. 9d. per lb., duty paid.

AGAR.—*Kobé* No. 1 is from 12s. 3d. per lb., duty paid, and 11s. c.i.f.

ALES.—Prime Cape for shipment is valued at 330s. per cwt., c.i.f.; spot, 350s. to 355s. Curaçao, 345s. spot and 340s., c.i.f.

ANTIMONY.—English 99.6 per cent. is £222 10s.; 99 per cent., £210 per ton.

ASAFETIDA.—Persian block is scarce on the spot with prices nominal.

BALSAMS.—Quotations (per lb.) are:—CANADA: No offers from origin; spot, nominally 22s. 6d. COPAIBA, soluble, 8s. to 10s. duty paid. PERU, short at origin; spot, 9s. 3d., in bond. TOLU (genuine as imported) is 27s. 6d.; B.P. is 17s. 6d., spot, c.i.f.

BENZOIN.—Sumatra block on the spot is from £25 to £30 per cwt. No. 1 for shipment is £23 5s. c.i.f. Almonds, 15s. per lb., c.i.f.

CAMPHOR.—B.P. POWDER is from 5s. 3d. per lb., duty paid. TABLETS, ½-oz. are 5s. 10d., c.i.f., and 6s. 4½d., spot.

CAPSICUMS.—East African on stalk are 150s. per cwt. on the spot.

CARDAMOMS.—Aleppy greens for shipment are 14s. 9d. per lb., c.i.f., and 15s. 6d. spot; seeds, 20s., c.i.f.

CASCARA SAGRADA.—American 1955 peel is offered at 260s. per cwt., duty paid, or 245s. in bond. New-crop for July-August shipment, 237s. 6d., c.i.f.

**CHERRY BARK.** — Thin natural is from 1s. 6½d. per lb., duty paid, and rossed, 2s., on the spot.

**CHILLIES.** — Mombasa, spot 290s. per cwt., 280s., c.i.f. Sierra Leone, no offers.

**CINNAMON.** — Ceylon for shipment (c.i.f.) per lb., OOOO, 7s. 1½d.; OOO, 6s. 11½d.; OO, 6s. 9½d.; O, 6s. 7½d.; firsts, 5s. 8½d.; quillings, 3s. 7½d.; chips, 10d. to 11d.

**CLOVES.** — Zanzibar on the spot are now quoted at 3s. 3d. per lb.; prompt shipment, 3s. 2½d., c.i.f. Madagascar, 2s. 7d., c.i.f.

**COLOCYNTH PULP.** — Spot offers are 4s. 6d. per lb., duty paid.

**DIGITALIS LEAF.** — *Purpurea* is offered at 3s. 2d. per lb., c.i.f.

**ERGOT.** — Portuguese is about 7s. per lb., c.i.f.; East European, 4s., c.i.f.; Hungarian, high-testing, 11s. 6d., and American, 10s., both landed terms.

**GALANGAL.** — No. 1 root is quoted at 57s. 6d. per cwt., c.i.f.

**GINGER.** — African on the spot is 260s. per cwt., with July-August shipment at 232s. 6d., c.i.f. Jamaican No. 3 for July shipment, 51s. 5d., c.i.f., spot, No. 3, 600s.

**HONEY.** — Australian light-amber is 145s. and medium-amber, 140s.; Argentine, 145s.; Jamaican, 145s. to 150s., all per cwt., on the spot.

**HYDRASTIS.** — Root is 22s. per lb. on the spot.

**IPECACUANHA.** — Quiet. Colombian, 42s. 6d., spot, and 40s., c.i.f. Matto Grosso, 42s., spot, and 39s., c.i.f. Nicarguan, afloat is quoted at 56s. 6d. per lb., c.i.f.; shipment, 55s., c.i.f., nominal.

**KARAYA.** — No. 1 gum on the spot is now quoted at 295s. per cwt., and No. 2 at 245s.

**KOLA NUTS.** — Jamaican are offered at about 8d. per lb., spot, and African, 5½d.

**LANOLIN.** — In 1-ton lots the price of ANHYDROUS, B.P., is from 160s. to 165s. per cwt.; 5-cwt. lots from 162s. to 167s. per cwt. HYDROUS, B.P., is from 140s. to 142s. for similar quantities. All in drums, carriage paid, U.K.

**LIQUORICE.** — Quotations (per cwt.) for natural root are: Anatolian, 42s. 6d.; Russian, 47s. 6d.; Persian, 35s. Block juice is 200s. per cwt. for the Anatolian and 185s. for Chinese and British on the spot. Italian stick from 310s. to 475s. per cwt., duty paid.

**LOBELIA HERB.** — Spot material is 11s. to 11s. 6d. per lb. August-September shipment, 10s. 6d.

**Lycopodium.** — Supplies of Russian triple-sifted are 7s. 3d. per lb. in bond.

**MACE.** — Whole on the spot is 22s. per lb.

**MENTHOL.** — Chinese, 48s. per lb. in bond (51s., duty paid). September-October shipment, 45s., c.i.f. Brazilian, 40s. 6d. in bond; 40s., c.i.f.

**MERCURY.** — Per flask (76-lb.) £85 on the spot.

**MYRRH.** — Selected sorts are unobtainable on the spot. Shipment about £400 per ton, c.i.f., asked.

**NUTMEGS.** — West Indian on the spot are quoted at 6s. 9d. per lb. for 80's; sound unassorted, 6s. 6d.; wormy and broken, 5s. 6d.

**ORANGE PEEL.** — West Indian bitter quarters are 11d. to 1s. per lb.; Spanish, 1s. 1d. to 1s. 3d.

**PAPAIN.** — Spot nominal value for East African grade one is 23s. per lb. and Ceylon brown, 17s.

**PEPPER.** — Firmer. White Sarawak is now quoted on spot at 2s. 5½d. per lb., with July shipment at 2s. 3½d., c.i.f. Black Sarawak is nominal at 1s. 10½d. per lb., spot; July shipment, 1s. 7½d., c.i.f. Black Malabar, 270s. per cwt. on the spot; July-August shipment, 237s. 6d., c.i.f.

**SEEDS.** — (Per cwt.) **ANISE.** — Tunisian, 220s., in bond; Spanish, 255s., duty paid. **CARAWAY.** — Dutch, 127s. 6d., duty paid. **CELERY.** — Indian, 140s., spot. **CORIANDER.** — Spot, Moroccan, nominal at 95s., duty paid; Rumanian or Danubian, 62s. 6d.; splits, 55s., and Bulgarian smalls, 52s. 6d., all duty paid. **CUMIN.** — Cyprian, 130s.; Moroccan, 132s. 6d., duty paid; Iranian, 125s., duty paid. Cyprian new-crop for shipment quoted at 110s. c.i.f. **DILL.** — Indian offered at 65s. on spot. **FENNEL.** — Indian quoted at 95s., spot. **FENUGREEK.** — Spot. Indian, 70s.; Moroccan, 68s., duty paid. **MUSTARD.** — English, 66s. to 77s. 6d., according to quality.

**SENEGA.** — Spot is 17s. 6d. per lb. Shipment, new-crop, 16s. 9d., c.i.f., quoted.

**Senna.** — *Tinnevelly* LEAVES (per lb.): — Prime bold, 1s. 4½d.; prime No. 3, 8d.; f.a.q., No. 3, 7½d. all on the spot; PODS, f.a.q., new-crop, 7½d., c.i.f. Manufacturing, 6½d., spot. *Alexandrian* manufacturing pods, 10d.; hand-picked from 4s. 6d. to 6s. 9d., as to quality.

**SERPENTARIA.** — Offers for shipment are quoted at 40s. per lb., landed terms.

**SHELLAC.** — F.O.T.N., 295s. per cwt.; F.O. No. 1, 340s.; fine orange, 360s. to 405s.

**SLIPPERY ELM.** — Grinding quality bark is 2s. 6d. per lb.

**SQUILL.** — White is offered on the spot at 57s. 6d. to 62s. 6d.

**STRAMONIUM.** — Indian LEAVES are 70s. per cwt. and European 80s. on the spot.

**STROPHANTHUS.** — *Kombé* on the spot is 6s. 9d. per lb. for the 100 per cent.; *Gratus* is 12s.

**STYRAX.** — Scarce. Spot is not quoted. Shipment nominal.

**TONQUIN BEANS.** — Para frosted are 6s. 6d. per lb. on the spot.

**TRAGACANTH.** — No. 1 ribbon is £175 to £180 per cwt.; No. 2, £135 to £140.

**TURMERIC.** — Madras finger on the spot is 92s. 6d. per cwt. with July shipment quoted at 82s. 6d., c.i.f.

**VALERIAN ROOT.** — Indian on the spot is 140s. per cwt. Dutch, 182s., c.i.f.

**VANILLIN.** — Rates (per lb.) are now: — 5-cwt. lots, 27s. 6d.; 1-cwt., 27s. 9d.; 56-lb., 28s.; smaller quantities, 28s. 3d.

**WAXES.** — BEES' — Dar-es-Salaam, shipment, 545s. nominal, c.i.f., spot, 560s.; Sudanese, 545s. duty paid, and 485s., c.i.f.; Abyssinian, spot 570s., duty paid, shipment, 490s., c.i.f. **CANDELLIA.** — Shipment, 520s. per cwt. landed; spot is 540s. **CARNAUBA.** — Fatty grey, spot, 600s. per cwt.; for shipment, 585s., c.i.f. Prime yellow, spot, 1,140s.; shipment, 1,100s., c.i.f. (per cwt.).

**WITCH HAZEL LEAVES.** — Spot supplies are 2s. 3d. per lb.; July shipment, 2s. 1d., c.i.f.

### Essential and Expressed Oils

**AMBER.** — Rectified on the spot quoted at from 1s. 6d. per lb.

**ANGELICA.** — Seed, 225s. per lb.; root, 400s.

**ANISE.** — Chinese, 14s. 6d. per lb., spot; 3s. 6d., c.i.f.

**BOIS DE ROSE.** — Brazilian is 26s. per lb. on the spot and 23s. 6d., c.i.f.

**CASSIA.** — Original drums are about 14s. per lb. on the spot. Shipment, 13s. 3d., c.i.f.

**CASTOR.** — Minimum 2-ton lots of pharmaceutical quality £146 per ton, naked ex mill, July-August delivery.

**CELERY SEED.** — Oil is 105s. per lb. for bulk lots.

**CINNAMON.** — From quillings, English-distilled is quoted at 30s. per oz. Other B.P. oils available down to 90s. per lb. Ceylon leaf, 11s. per lb., spot.

**CITRONELLA.** — Ceylon, 6s. 9d. per lb., spot; shipment, 5s. 6d., c.i.f. Formosa spot, 10s., in bond; shipment, July-August, 7s. 4½d., c.i.f., as to position.

**CUBEBS.** — Spot price for small lots is 50s. per lb.

**DILL.** — B.P. English-distilled oil is quoted at 60s. per lb. Imported oils are from 33s. 6d. per lb.

**EUCALYPTUS.** — Australian 70 to 75 per cent. eucalyptol on the spot is 5s. 8d. per lb.; 80 to 85 per cent., 6s. 4d. Spanish 70 to 75 per cent. at 5s. 6d., duty paid. Chinese type, 4s. 9d., duty paid.

**FENNEL.** — Spanish sweet on the spot is quoted from 12s. per lb. with Russian at 18s. 6d.

**GARLIC.** — English is 5s. per oz.

**GERANIUM.** — Bourbon is from 102s. 6d. per lb. on the spot and Algerian, 72s. 6d.

**GINGER.** — English-distilled oil is 205s. per lb. Imported oils are now 170s. per lb., duty paid.

**GINGERGRASS.** — Offers are from 28s. per lb.

**GRAPEFRUIT.** — Jamaican is 16s. 6d. per lb.

**HYDNOCARPUS.** — Spot is about 2s. 2d. per lb.

**JUNIPER BERRY.** — Czechoslovakian oil (B.P.C.), 15s. 6d. per lb. and Jugo-Slavian, 14s. on the spot. English-distilled is 155s.

**LAVANDIN.** — Spot is from 12s. to 15s. per lb. as to quality, for original drums.

**LAVENDER SPIKE.** — Spanish is offered at 13s. 6d. per lb. on the spot.

**LEMONGRASS.** — Spot is 13s. per lb.; shipment, 9s. 6d. to 9s. 9d., c.i.f., as to position.

**LIME.** — Supplies of West Indian distilled are offered from 32s. to 35s. per lb. on the spot.

**NUTMEG.** — English distilled is nominally 120s. per lb.

**ORIGANUM.** — Sellers of 75 per cent. phenols at 13s. 6d. per lb.

**OTTO OF ROSE.** — Bulgarian is 450s. and Turkish, 190s. per oz.

**PALMAROSA.** — East Indian, 60s., spot; 58s., c.i.f.

**PATCHOULI.** — Penang is 40s. duty paid, and 33s. 6d., c.i.f.

**PEPPERMINT.** — *Arvensis*: Chinese is 31s. per lb. on the spot and 29s., c.i.f. Brazil, 12s. 9d., spot, and 21s. 9d., c.i.f. Italian " Mitcham " -type oil is 56s. to 65s. spot, as to make. American, 42s. 6d. to 47s. 6d. English Mitcham, 190s. to 200s.

**PINE.** — *Pumilio* on the spot is from 16s. per lb.; *sylvestris*, 9s. Siberian (*abietis*), 12s. 6d.

**ROSEMARY.** — Spanish oil on the spot is from 5s. 6d. per lb., duty paid.

**SASSAFRAS.** — Brazilian is 4s. 3d. per lb. duty paid.

**SPEARMINT.** — Offers of U.S. oil for shipment are about 35s. 6d. per lb., c.i.f. with spot at 38s. Dutch quoted at 35s. duty paid, with Chinese offered at 27s. 6d.

**TANGERINE.** — Sicilian is from 38s. to 48s. per lb., on the spot.

**THYME.** — Spot is 9s. per lb. for th. B.P.C.

### UNITED STATES REPORT

**NEW YORK, JULY 17:** The spot market for DRUGS and FINE CHEMICALS was quiet with no price changes. Higher per lb. were HYDRASTIS at \$3.00 (up 3 cents), and OLIBANUM siftings at 1 cent (up two cents). Lower was PODOPHYLLUM at 49 cents a lb. (one cent). ESSENTIAL OILS were generally featureless with Dalmatian SAGE advanced 2 cents to \$4.25 per lb.

## WORLD TRADE

**U.S. Investment in Argentina.** — The Argentine Central Bank has approved a proposal by Eli Lilly International, Indiana, U.S., to establish a plant in Argentina for the manufacture of medicinal products.

**Italy's Mercury Output.** — Italian mercury output in the first 1956 quarter was 483 tons compared with 469 tons in the same period of 1955. In the first four months of 1956, Italy exported 836.6 metric tons which were valued at 3,671,847 million lire. The exports included 61.2 metric tons to the United Kingdom.

**Swiss Chemical Plant for Brazil.** — Three Swiss chemical companies—Sandoz, Ciba and Geigy have agreed jointly to form the Companhia Industrias Quimicas Resende S.A., in Brazil and establish a plant in the State of Rio de Janeiro. Construction will begin in 1956 and production in 1959 with an initial estimated annual capacity of 300 tons of aniline and 150 tons of basic chemicals for the pharmaceutical and tanning industries.

## TRADE WITH BRAZIL

### Changing pattern of imports

THE value of exports from the United States to Brazil of medicinal drugs declined from \$20.7 millions in 1954 to \$11.4 millions in 1955, while that of industrial chemicals dropped from \$18.1 millions to \$5.6 millions. The same downward tendency is observed in exports to other Latin American markets, where expanding local production and competition from Europe are threatening the post-war domination of U.S. chemical manufacturers. The latter's position is still strong, but technical journals estimate that, if the percentage decline of the last two years persists, their participation will shortly be reduced from two-thirds to one-third. In other words the market will be divided in equal shares between U.S.A., European and local manufacturers.

In Brazil the chemical and pharmaceutical industries have been included in the priority list of activities for which permits are granted to import machinery and equipment to establish new industries, or to amplify existing installations. The Brazilian Economy Council announces that new capital issues in industrial undertakings totalled 1,321 million cruzeiros in the first quarter of 1956; chemical-pharmaceutical firms expanded by 6.5 per cent. The Brazilian subsidiary of Becton, Deckman & Co., has inaugurated plant at Juiz de Fora, Minas Gerais, to produce hypodermic syringes.

The price of carnauba wax, type 1, rose to 2,000 cruzeiros per arroba of 33 lb., f.o.b. Fortaleza, in June. Shipments were made at this price to U.S., Germany and France. Brazil's exports to U.S. in 1955 included castor oil, \$3.8 millions; carnauba wax, \$10.9 millions; bois-de-rose, \$1.9 millions; menthol \$1.5 millions. The Bolivian Public Health Service has placed an order in Brazil for 30,000 bottles of penicillin, 20,000 bottles of hydrostreptomycin and 20,000 capsules of aureomycin.

## TRADE MARKS

### APPLICATIONS ADVISED BEFORE REGISTRATION

From the "Trade Marks Journal," June 27

For plastics in the form of powders, pastes, liquids, emulsions, dispersions and granulates, all for industrial use (1)

EJECTA, 742,438, by James Halstead, Ltd., Manchester. RISSAN, 752,215, by Organico, Paris, France.

For sensitised photographic films, photographic paper and chemicals for photographic and photocopying purposes (1)

Device with the word AGFA, 743,194, VARIO-LUX, VARITEX, 750,022-23, by Agfa, A.G., Für Photofabrikation, Leverkusen, Germany.

For sorbitol and mannitol, all being chemical products for use in industry (1)

ATLAS, 744,125, by Atlas Powder Co., Wilmington, U.S.A.

For all goods (1)

Device with word MOLTOPREN, 749,041, by Farbenfabriken Bayer, A.G., Leverkusen, Germany. CLARYL, 751,349, by Société des Usines Chimiques Rhône-Poulenc, Paris, France. GOHSENOL, 752,258, by Nippon Gosei Kagaku Kogyo Kabushiki Kaisha, Osaka, Japan.

For chemical substances used in the manufacture and fixing of perfumes (1)

HELIOPRETE, 749,721, by Schimmel Boehm, Ltd., London, W.1.

For chemical products used in agriculture (1)

SILOSOL, 752,309, by Henry Richardson & Co, (York), Ltd., York.

For gases sold in capsules (1)

SPARK WHIP, 752,492, by Sparklets, Ltd., London, S.W.1.

For synthetic resins (1)

MARLEX, 752,518, by Phillips Petroleum Co., Bartlesville, Oklahoma, U.S.A.

For toilet soap (3)

Device with the word BUCHANAN'S, 737,461, by Potter & Clarke, Ltd., Barking, Essex.

For detergents for cleaning dairy fittings, milk bottles, etc. (3)

ALPHA, 750,040, by the Reddish Chemical Co., Ltd., Stockport, Cheshire.

For soaps, perfumes, non-medicated toilet preparations, cosmetics, preparations for the hair and dentifrices (3)

ENVOY, 750,168, by the Birmingham Chemical Co., Ltd., Lichfield, Staffs. PAPROKA, 751,937, by Eau De Cologne & Parfumerie Fabrik, Glockengasse No. 4711, Gegenüber der Pferdepost von Ferd Muhens, 4711, Cologne, Germany.

For preparations and substances for laundry use; cleaning, polishing, etc., preparations; perfumes, non-medicated toilet preparations, cosmetics; and hair lotions and dentifrices; but not including soap or any goods for sale in Bahrain (3)

Device with words AHMED HASSAN EBRAHIM BAHREIN PERSIAN GULF, 747,686, by Ahmed Hassan Ebrahim, Manama, Bahrain.

For powder preparations for removing the tannin deposits from the inside of teapots (3)

TANGO, 750,897, by W. & F. Walker, Ltd., Kirkby, Lancs.

For toilet shampoos (3)

GOLF, 751,426, by Hans Schwarzkopf Kommanditgesellschaft, Hamburg-Altona, Germany.

For non-medicated talcum powder (3)

Device with the words COW AND GATE, Smiler, 751,787, by Cow & Gate, Ltd., Guildford, Surrey.

For non-medicated toilet preparations (3)

AURORA, 752,060, BOOTIES, 752,197, by Boots Pure Drug Co., Ltd., Nottingham.

For shaving lotions (3)

PRELECT, 752,422, by Boots Pure Drug Co., Ltd., Nottingham.

For soap powders and soap flakes (3)

HYTETA, 752,843, by Widnes Soap Co., Ltd., Widnes, Lancs.

For materials prepared for bandaging (5)

ILLMOND, 751,122, by Illingworth & Co., (Bradford), Ltd., Shelf, Yorks.

For medicinal petroleum jelly for sale in Northern Rhodesia (5)

SUPALENE, 743,892, by Supershine Products (Private), Ltd., Salisbury, Southern Rhodesia.

For medicinal preparations containing reserpine (5)

ESKASERPINE, 744,846, by Smith, Kline & French International Co., Philadelphia, U.S.A.

For infants' and invalids' foods (5)

HYPROTOX, 745,537, by Oxo, Ltd., London, E.C.4.

For vitamin preparations prepared for use in medicine and pharmacy (5)

VANITIN, 747,738, by Roche Products, Ltd., Welwyn Garden City, Herts.

For all goods (5)

TERPACOL, 748,804, by Brook Parker & Co., Ltd., Bradford, Yorks, PREDSOLAN, 749,150, DIPHENATIL, 750,068, by Glaxo Laboratories, Ltd., Greenford, Middlesex. ZYRITON, 752,380, by Allen & Hanburys, Ltd., London, E.2.

For pharmaceutical preparations and substances for use in the treatment of seborrhœa, psoriasis, pityriasis and dandruff (5)

GENISOL, 749,517, by Genatosan, Ltd., Loughborough, Leics.

For pharmaceutical preparations in tablet form containing esters or derivatives of methylpentynol carbamate (5)

OVET, 750,619, by British Schering, Ltd., London, W.8.

For pharmaceutical preparations (5)

MYSTACIN, 751,084, by E. R. Squibb & Sons, Ltd., London, W.1.

For pharmaceutical preparations and substances for human and veterinary use, sanitary preparations, medical and surgical plasters and bandages (5)

LANADIGIN, 751,834, by P. Beiersdorf & Co., A.G., Hamburg, Germany.

For pharmaceutical preparations and substances (5)

FLUSCORBIN, 751,974, by Société de Financement Industriel et Commercial Paris, France. SENOSTAB, 752,552, by Boots Pure Drug Co., Ltd., Nottingham.

For deodorants and anti-perspirants (5)

Device with the word FREN, 752,114, by A. & F. Pears, Ltd., Isleworth, Middlesex.

For pharmaceutical preparations for the treatment of colds and allergies (5)

ANAHIST, 752,132, by Anahist Co., Inc., Yonkers, New York, U.S.A.

For safety razors and blades (8)

Device with word NACET, 744,028, by Gillette Industries, Ltd., Isleworth, Middlesex.

For lenses (9)

KINESCOPE, 752,157, by Ross, Ltd., London, S.W.4.

For surgical, medical, dental and veterinary apparatus and instruments, all being electrically operated (10)

Device of letters S H, B716,659, by Siemens & Halske, A.G., Munich, Germany.

For sponges, toilet articles, and cleaning, etc., material all made of foamed plastics (21)

SYNOFOAM, 751,963, by Fletcher & Farlow, Ltd., London, E.C.2.

For flavourings (other than essential oils) (30)

PASCODORA, 748,358, by Polak & Schwarz (England), Ltd., Enfield, Middlesex. SEALAROME, 752,207, by Lautier Fils, Ltd., London, W.4.

From the "Trade Marks Journal," July 4

For stabilising agents being chemical preparations for use in the manufacture of ice cream (1)

ALGINADE, B722,421, by Alginate Industries, Ltd., London, W.C.2.

For all goods (1)

Device, B745,920, by Charles Lennig & Co. (Great Britain), Ltd., London, W.C.2. RENACIT, 749,094, by Farbenfabriken Bayer A.G., Leverkusen, Germany.

For sensitised photographic papers (1)

DIRECTOSTAT, 750,021, by Agfa A.G., Für Photofabrikation, Leverkusen, Germany.

For chemical products used in industry (1)

ADUVEX, 752,570, by Ward, Blenkinsop & Co., Ltd., London, W.C.1.

## PRINT AND PUBLICITY

### Advertising Campaigns

CUSSENS, SONS & CO., LTD., Kersal Vale, Manchester, 7: Cussons talcum powders, In *Woman*, and seven other women's magazines, and *Daily Mirror*.

### Commercial Television

THE following products are being advertised on the days shown:

#### ALL STATIONS

FRIDAY, August 3: Kodak film (between 7.25 and 10.5 p.m.).

DAILY, July 29-August 4: Field's French soaps (two appearances).

#### LONDON STATION

SUNDAY, July 29: Beecham's pills; Go deodorant (at 9.58 p.m.); Anadin.

MONDAY, July 30: Brylcreem (between 10 and 10.30 p.m.).

TUESDAY, July 31: Nivea.

WEDNESDAY, August 1: Gibbs' S.R. tooth-paste (between 10 and 10.30 p.m.); Nivea.

FRIDAY, August 3: Silvikrin (between 10.5 and 10.35 p.m.); Knight's Castile soap; Anadin; Beecham's pills.

SATURDAY, August 4: Silvikrin (time signals).

#### BIRMINGHAM STATION

SUNDAY, July 29: Knight's Castile soap (between 10 and 10.30 p.m.); Kolynos.

THURSDAY, August 2: Gibbs' S.R. tooth-paste (between 8 and 10 p.m.).

FRIDAY, August 3: Go deodorant (at 9.58 p.m.); Knight's Castile soap (between 8 and 10 p.m.).

SATURDAY, August 4: Silvikrin (time signals).

#### MANCHESTER STATION

SUNDAY, July 29: Knight's Castile soap (between 7.30 and 8 p.m.); Kolynos.

SATURDAY, August 4: Fennings' cooling powders, mother's book, rheumatic tablets (between 2.45 and 3.30 p.m., and 10.45 and 11 p.m.).

DAILY: July 30-August 4: Silvikrin.

### Price Lists

POLAK & SCHWARZ (ENGLAND), LTD., 50 Great Cambridge Road, Enfield, Middlesex: Aromatic chemicals, July-September. Pp. 16.

### Booklets and Leaflets

PARKE, DAVIS & CO., LTD., Staines Road, Hounslow, Middlesex: "Euthymol for Family Business." Pp. 8.



DISPLAY "DISPENSER": Stock-holding show-piece produced by D. & W. Gibbs, Ltd., Hesketh House, Portman Square, London, W.1, for Pears transparent soap.



HAIR PRODUCT SHOWCARDS : Three of a number of showcards produced by County Laboratories, Ltd., Honeypot Lane, Stanmore, for products of the company.

### Catalogues

AGFA, LTD., Deer Park Road, Wimbledon Factory Estate, London, S.W.19: Cameras, photographic equipment, accessories; photographic papers, developers, June. Pp. 20 and 12.

PARKE, DAVIS & CO., LTD., Staines Road, Hounslow, Middlesex: Additions and alterations to catalogue No. 2, May. Pp. 11 (gummed tear-sheets).

PULLIN OPTICAL CO., LTD., 93 New Cavendish Street, London, W.1: General photographic, 1956. Pp. 68.

### Medical Propaganda

Manufacturers' leaflets, folders, booklets, etc., directed to doctors but available to pharmacists.

ORGANON LABORATORIES, LTD., Brettonham House, Lancaster Place, London, W.C.2: "Duactin Control of Nausea and Vomiting of Pregnancy," "Piton Snuff" (4-p. booklet), "Mixogen" (12-p. booklet).

## COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

### Monday, July 23

WATFORD AND ST. ALBANS BRANCH, PHARMACEUTICAL SOCIETY, King's Langley Common (near crossroads), at 7.30 p.m. Car rally and treasure hunt.

SHEFFIELD PHARMACY CLUB, Trippet Lane, Sheffield, at 7.30 p.m. Meet for follow-my-leader mystery tour.

### Wednesday, July 25

HARROGATE BRANCH, PHARMACEUTICAL SOCIETY, Imperial Chemical Industries, Ltd., Fibres Division, Hookstone Road, Harrogate, at 2.30 p.m. Visit.

LIVERPOOL CHEMISTS' GOLFING SOCIETY, Hillside, Fixture.

## C. & D. WEEKLY LIST OF PRICES

A=Advanced; R=Reduced; I.R.P.=Inclusive Retail Price; \*=Tax 30 per cent.; †=Tax 90 per cent.

J. BIBBY & SONS, LTD. (from July 9)

	3 doz.	I.R.P.
Clozone handy	19 2	7 1 A
family	43 6	1 5 A
Bibby soap flakes popular	24 0	9 1 A
	Doz.	
family	19 4	1 11 A

BOOTS PURE DRUG CO., LTD. (from July 17)

	Each	
Neumannin tablets 50 mgm.	100	2 4 3 6 R

THE BRITISH DRUG HOUSES, LTD.

	12	1 10	2 9 A
Volpar gels	1 10	2 9 A	
paste, tube	1 10	2 9 A	
paste and applicator	4 2	6 3 A	

Radiostoleum capsules 500

1,000

11 3 16 11 R

21 0 31 6 R

### P.A.T.A. PROTECTED LIST

(Alterations notified this week by the Proprietary Articles Trade Association.)

LAMBERT CHEMICAL CO., LTD. (from July 9)

	Doz.	
Listerine antiseptic*	3 oz.	17 2 2 6 A
7 oz.	30 10	4 6 A

14 oz.

51 5 7 6 A

14 oz.

33 9 4 1

soother 45 0 6

Perfec carded teat 33 9 4 1

soother 45 0 6

Gross 33 9 4 1

soother 45 0 6

ELI LILLY & CO., LTD. (from July 12)

Amytal tablets

½ gr. No. 1678 500 62 0 7 9 R

1½ gr. No. 1462 500 134 0 16 9 R

NURSE SYKES CO. (correction)

Nurse Sykes' powders\* 38 54 0 7 0 A

tablets\* 76 54 0 7 0 A

ADDITION TO PROTECTED LIST

J. G. INGRAM & SON, LTD.

Gross

Perfec carded teat 33 9 4 1

soother 45 0 6

NEW PRODUCTS AND PACKS

BIOREX (MARKETING), LTD.

Each

Biosone G.A. tablets\* 100 105 0 189 0

BOOTS PURE DRUG CO., LTD.

Polyantibiotic root canal cream cartridge 4 0 6 0

Sol-Viules Penicillin G crystalline 0.5 m.u. 2 6 3 9

### THE BRITISH DRUG HOUSES, LTD.

Proflavine emulsion 500 gm. 3 6 5 3

2 kilos 14 6 21 0

Valibrom elixir 4 fl. oz. 2 0 3 8

500 mils 5 9

2 litres 20 8

Valibrom co. elixir 4 fl. oz. 2 4 4 3

1 litre 13 0

Estigyn elixir 1 litre 11 2 16 2

Ferbelan 4 fl. oz. 2 2 3 3

1 litre 14 8

2 litres 27 0

Livadex oral 500 mils 25 0 37 6

2 litres 99 6

Livogen 4 fl. oz. 4 0 6 0

500 mils 15 6 23 3

2 litres 56 6

Mandelix 1 litre 29 2

Mepilin elixir 500 mils 20 6 30 9

Myanesin elixir 1 litre 17 10 26 2

2 litres 33 6

Radiomulsin 4 fl. oz. 2 8 4 0

500 mils 9 8 14 6

2 litres 36 6

Spirovine 4 fl. oz. 3 4 6 0

1 litre 23 8

### CHAPPIE, LTD.

Meet "double size" 1 11

### CIBA LABORATORIES, LTD.

Ecolid tablets 25 mgm. 25 5 0

100 100 85 0

500 500 34 0

50 mgm. 500 165 0

### GLAXO LABORATORIES, LTD.

Ef-Cortelan ointment Nos. 1 and 2 15 gm. 7 6 10 0

### GOLDEN, LTD.

Tress† small size 8 10 1 9

### G. D. SEARLE & CO., LTD.

Florquin tablets 50 17 6

### SOUTHERN LABORATORIES, LTD.

E.P. tablets\* strip 1 11

# 'Marzine'

TRADE MARK

**STOPS travel sickness**

**National Advertising is now appearing.**

**Make sure that 'Marzine' Display Material is prominently shown in your window or on your counter.**

A good display of 'Marzine' now will ensure that you get your full share of this profitable business.

**SHOW MORE  
SELL MORE**



Check your stocks of 'MARZINE'—remember that our Bonus offer holds good until the end of July. Orders for 3 doz. or more, carry a bonus of one free tube for each dozen.



BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd) LONDON

1065

# PHENOXETOL

The original antipyocyanine compound with its developing use as a special preservative and antiseptic for penicillin creams, anti-burn ointments and pharmaceutical-medicinal preparations.

*We shall be happy to send you full technical details on request.*

*Sole Distributors for the United Kingdom:*

P. SAMUELSON & CO., ROMAN WALL HOUSE, I CRUTCHED FRIARS, E.C.3. Telephone: ROYAL 2117/8



CORKS,  
STOPPERS,  
BUNGS.

Telephone

Royal 4922/3

CAMPERDOWN STREET,  
LEMAN STREET, LONDON, E.I.

NIPA LABORATORIES LTD  
TREFOREST INDUSTRIAL ESTATE  
Nr. CARDIFF TEL: TREFOREST 2128/9

**HCL**  
IMPORTERS AND SUPPLIERS  
OF  
PHARMACEUTICALS

SODIUM AMINOSALICYLATE B.P.  
ISONIAZID B.P.C.  
NICOTINAMIDE B.P.  
NICOTINIC ACID B.P.  
GLYCINE U.S.P.  
RESERPINE

HALEWOOD CHEMICALS LTD

111 - 115 EASTBOURNE MEWS  
LONDON, W.2  
AMBassador 4198-5457

# The Beatson Tablet

Distinctive SQUARE shape

Black Plastic or White Enamelled

Caps.

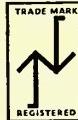
Reasonable in Price.

Prompt Despatch from stock.

*Available in the following sizes:*

$\frac{1}{2}$     $\frac{3}{4}$    1    $1\frac{1}{2}$     $1\frac{3}{4}$    2    $3\frac{1}{2}$    oz.

"The Sign of a



*Good Bottle*"

*Suggested Packs :*

$\frac{1}{2}$  oz. size 25 ASPIRIN

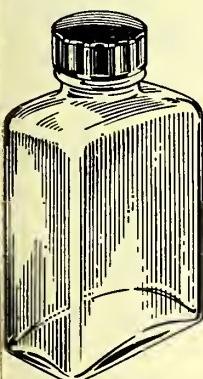
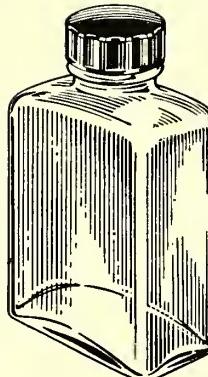
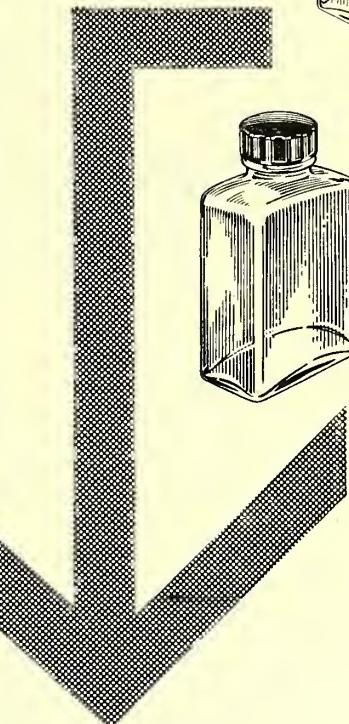
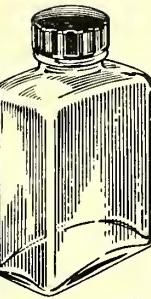
1 oz. size 50 ASPIRIN  
25 Codeine

$1\frac{1}{4}$  oz. size 100 ASPIRIN  
50 Codeine

$3\frac{1}{2}$  oz. size 100 ASPIRIN  
100 Codeine

**Beatson Clark & Co.,Ltd.**

GLASS BOTTLE MANUFACTURERS  
ROOTHERHAM ESTABLISHED 1751 YORKS.



# Something they can trust

The public likes something reliable, something with dependable high quality. A faithful following is the public's response to trustworthy products that give real satisfaction.

Such is the popularity of

**CUTICURA SOAP**

**CUTICURA OINTMENT**

**CUTICURA TALCUM POWDER**

**CUTICURA SHAVING STICK**

There is a growing circle of discriminating people who appreciate high quality and insist on these soothing, protective, fragrant, mildly medicated Preparations, for care of the skin. Just display one each of these eye-catching firm family favourites in your attractive window, and make sure this steady all-the-year-round business comes your way.

*For your next order list two new quality preparations*

**CUTICURA HAND CREAM AND CUTICURA MEDICATED LIQUID**  
*are also now available*

329

**SENNA**  
ALEXANDRIAN  
AND  
TINNEVELLY

**RAUWOLFIA**  
ALL VARIETIES

**JOHN RONALDSON**  
AND COMPANY LIMITED

*Established 1860*

3/4 CROOKED LANE, CANNON STREET  
LONDON, E.C.4

Telephone  
MANSLION HOUSE 1321

Cables:  
CLANRALD LONDON

HERBS · ROOTS · SEEDS · BARKS  
GUMS · ESSENTIAL OILS · WAXES  
SPICES · BALSAMS · RESINS

# SMALLER SIZE TRESS



Heavy advertising in  
**'WOMAN'**  
**'WOMAN'S OWN'**  
**'DAILY MIRROR'** etc.  
will reach  
**15,000,000 WOMEN**  
—widening the market for this  
fast-selling wave-set

TRESS, already one of the biggest selling wave sets, will reach an even wider market with the addition of this half-size pack. Be sure you have stocks to meet an entirely new demand for 1/9d Tress. The large size will still continue in demand by enthusiasts who have formed the habit of buying Tress at 2/10½d per bottle.

#### TRADE TERMS

**SMALL SIZE**  
Price 8/10d  
per dozen bottles  
plus 90% tax  
selling at 1/9d per bottle.

**LARGE SIZE**  
Price 14/5d  
per dozen bottles  
plus 90% tax  
selling at 2/10½d per bottle

**GOLDEN LIMITED, 7 GROSVENOR STREET, LONDON, W.I.** Hyde Park 1671

*Trade Enquiries for the Republic of Ireland should be addressed to : Lilmar Pharmaceuticals, Ltd., Santry, Dublin.*

*There is no secret  
behind the  
success of*

## **INECTO**

### *Colour Creme*

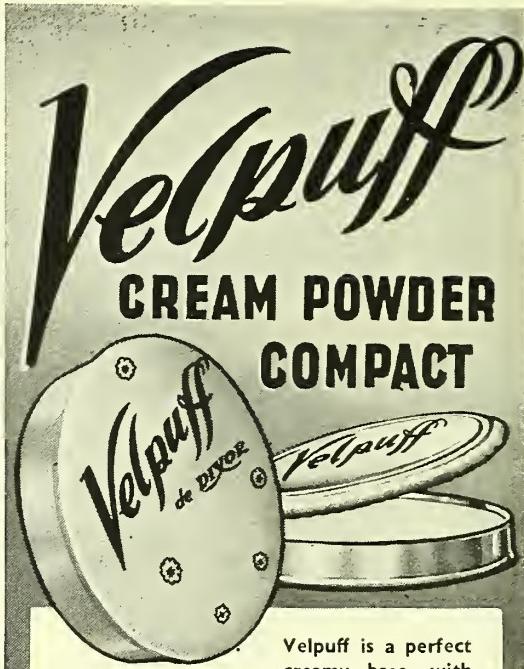
It is the best and most up-to-date permanent hair-tinting preparation on the market.

Complete and ready for use, with enclosed picture directions. There is a comprehensive range of 18 lovely natural shades from Deep Black to Light Blonde.

From your wholesaler  
3/4 plus P.T.  
8/- retail.

*please ask for  
shade indicator*

Enquiry Bureau: **INECTO HOUSE,**  
**27 DOVER STREET, LONDON, W.1.**  
HYDe Park 7541 (12 lines)



Velpuff is a perfect creamy base, with the softest, finest powder. Simple and quick to use, it is ready to be smoothed on with its own puff. Amazingly effective, this wonderful velvet texture make-up will stay matt for hours. The pack is  $2\frac{3}{4}$ " in diameter, and mounted on an attractive card for easy display.

**STOCK UP!**

**SALES UP!**

**RETAIL 3/9 EACH**  
**WHOLESALE 18/8 PER DOZ.**

4 SHADES  
FASCINATION (Natural)  
ENCHANTMENT (Rachel)  
MYSTIC TOUCH (Peach)  
IRRESISTIBLE (Brunette)

**Velouty de DIXOR POWDER CREAM**

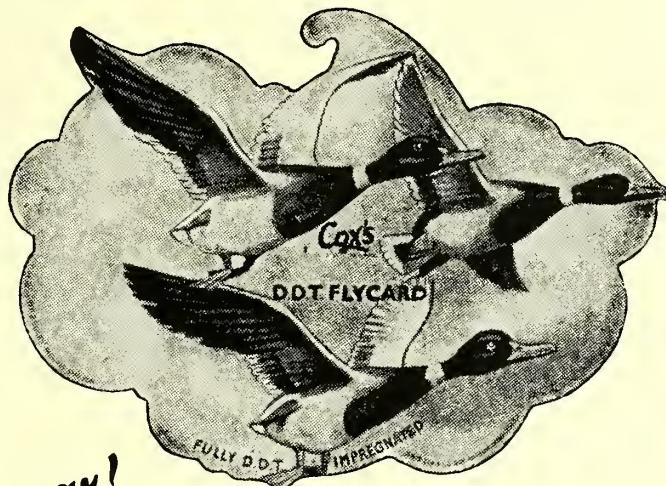
*Shades*  
IVORY NATURAL PEACH SUNGOLD  
OCHRE APRICOT and RACHEL  
TUBES No. 2 No. 3  
TRADE 7/6 doz. 12/3 doz. RETAIL 1/6 ea. 2/6 ea.  
JARS : TRADE 17/2 doz. RETAIL 3/6 ea.

**DIXOR Limited ST. LEONARD'S RD MORTLAKE LONDON. S.W. 14**

# Cox's

## D.D.T. FLYCARDS

GUARANTEED 100% IMPREGNATED



*New this year!*

<b>COX'S 3d. D.D.T. FLYCARDS (The ORIGINAL)</b>	<b>24/- per gross</b>
<b>COX'S 3d. D.D.T. CHIMPS</b>	<b>- - - - 24/-,,,"</b>
<b>COX'S 4d. D.D.T. PARROTS</b>	<b>- - - - 32/-,,,"</b>
<b>COX'S 4d. D.D.T. ROSE BASKETS</b>	<b>- - - - 32/-,,,"</b>
<b>COX'S 4d. D.D.T. WILD DUCKS</b>	<b>- - - - 32/-,,,"</b>

LESS 2½%—30 DAYS

**BONUS TERMS—10% ON ORDERS FOR 3 GROSS**

IN ANY ASSORTMENT

**NATIONALLY ADVERTISED**

JAMES COX & CO., D.D.T. WORKS, STH. HARROW, MIDDLESEX  
Telephone: BYRON 4326

**TOP QUALITY AND ATTRACTIVE PACKS**

**SELL**

**Cannon Rubber**  
**PRODUCTS**

'Modern' teats with their triple perforation and spiral reinforcement are preferred by mothers, as they give 'nearest to natural' feeding. Now in the new 'two-dozen pack,' they retail at 7½d. each and are available in three flow sizes.

Reliability and maximum comfort to baby are assured with the 'Modern' soother. With transparent or coloured rubber rings 1/3d. each and Junior soothers 1/-.

'Ba-By-By' teething rings of best quality rubber for strength and resilience. Obtainable in pastel pink, blue and white at 1/- each.

Ask your wholesaler for full details.

**'CAPITOL' BATHING CAPS** are made in several designs in a large range of attractive colours, including the new Multi-coloured moulded caps. Internal ribbing gives the close and watertight fitting so essential in a bathing cap.

THE CANNON RUBBER MANUFACTURERS, LTD.,  
Ashley Road, Tottenham, London, N.17.

A REVISED AND IMPROVED EDITION OF

## Pharmaceutical Emulsions and Emulsifying Agents

By L. M. Spalton, B.Pharm., M.P.S.

Now Bound in cloth and fully indexed

TODAY, the pharmacist is faced with an almost bewildering assortment of emulsifying agents, all having varying properties and requiring different methods of treatment. In this book the considerable range of these products has been classified, together with essential practical points about their pharmaceutical use. It contains chapters devoted to the theory of the formation of emulsions, properties of different emulsifying agents (classified into groups according to their structure and characteristics), the formulation and preparation of emulsions, the general methods of preparing emulsions with details of technique and causes of emulsion separation, preservation and storage of emulsion, etc. The practical uses of emulsifiers is dealt with at considerable length, together with methods of handling each type of emulsifying agent and full notes of incompatibilities and other matters. The book also contains a classified index of over 300 emulsifying agents with reference to their composition, type and uses, together with an index of manufacturers.

★ Every Pharmacist should possess a copy 9/- postage 6d.

Order through your bookseller or direct from the Publisher:-



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## First choice for the discerning woman

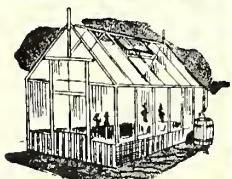
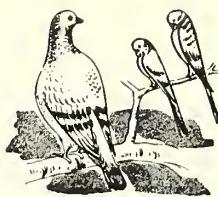
The particular quality and value of Mene is well known by women everywhere. Our sales figures prove that women have found that they can rely on these towels for super-soft comfort, economy and complete security.

Only the very finest materials are used in order to ensure maximum absorbency and protection.

**YOU can confidently recommend ...**



*Sell your customers the  
new MENE de Luxe  
SANITARY BELT*



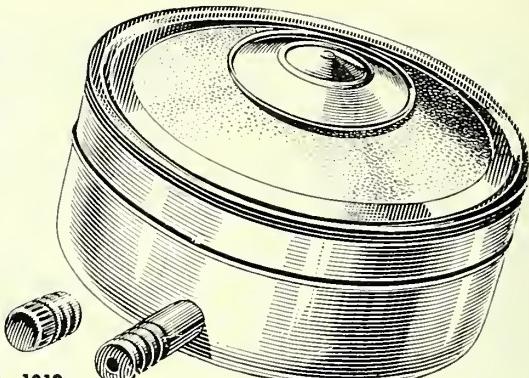
# B M S



No. 295

2½" wide x 1½" deep. In cartons containing 1 doz. with attractive coloured label.

Sample and prices  
on application.



No. 1019

4" wide x 1½" deep. In cartons containing six for window or counter display.

## Insect Powder Bellows

One-handed action—leaves the other hand free to uncover pest's hide-outs, thus giving maximum destroying power. Every puff can be made to count. Robust construction, light and easy to handle, mechanically foolproof, no parts to go wrong. Easily and quickly recharged. Indispensable to Horticulturists, Dog Breeders, Bird Fanciers, Hotel and Restaurant Kitchens, in the Home and wherever insect pests breed.

**BAKER METAL STOPPER COMPANY LIMITED.**

HADLEY STREET, KEY HILL, BIRMINGHAM, 18

Telephone: NORthern 3931-2  
Telegrams: "Screwtop" Birmingham, 1E

SANCTIONED ON N.H.S. PRESCRIPTIONS (FORM E.C. 10)

# EPHAZONE tablets

*The rational, symptomatic  
remedy for bronchial spasm in*

## ASTHMA & BRONCHITIS

CONTAINING IN  
EACH TABLET:  
Ephedrine  $\frac{1}{4}$  grain  
Theobromine  $\frac{1}{2}$  grain  
Phenazone 1 grain  
Calcium gluconate  $\frac{1}{2}$  grain.

*This preparation is not advertised to the general public.*

**EPHAZONE LTD**

59 BROOK STREET, LONDON, W.I.  
Telephone: MAYfair 5496.

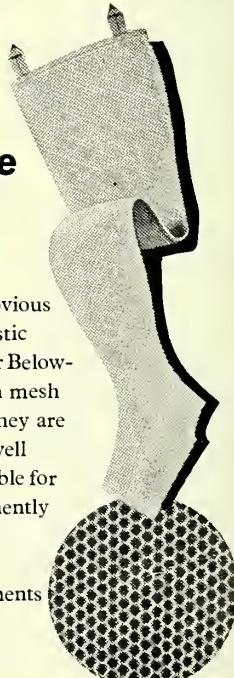
## For the Mild Case of Varicosity...

... 'Surgylon' Hose are the obvious prescription. 'Surgylon' Elastic Net Stockings, Above-Knee or Below-Knee, are made of nylon open mesh net fabric of fine texture. They are seamed and provide a light, well ventilated, mild support suitable for early varices. They are eminently comfortable, durable and inconspicuous.

Made to individual measurements  
— prompt despatch.

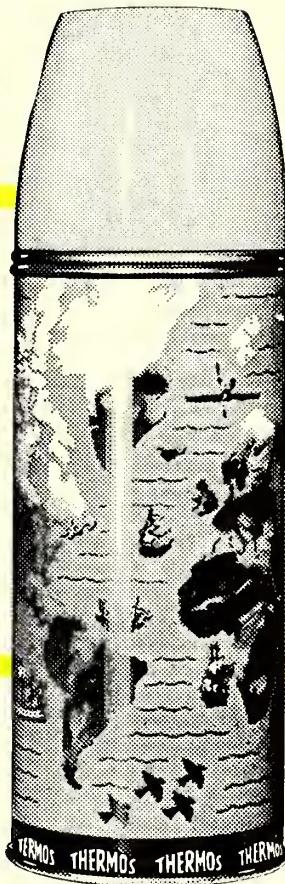
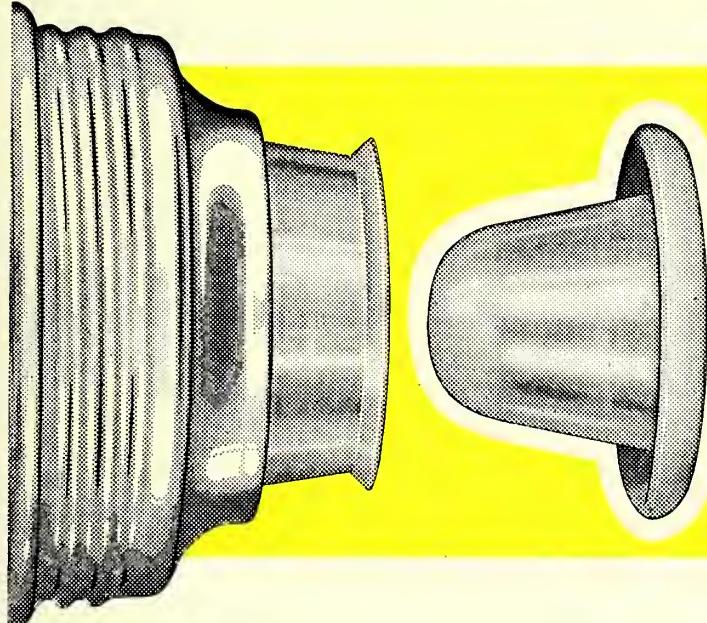
**SURGYLON** NYLON NET STOCKINGS  
may be supplied against N.H.S. prescriptions

Manufactured by Everlastic Ltd. for  
FASSETT & JOHNSON LTD., 86 Clerkenwell Road, London, E.C.1



**THERMOS**  
BRAND

FIRST WITH THE  
NON-DRIP  
POURING LIP



**Now Introduce THE FIRST-EVER  
SNAP-ON POLYTHENE STOPPER**

which:

*Snaps* on, lifts off in an instant

*Fits* tightly, cannot leak

*Keeps* hygienic, absorbs no flavour,  
washes easily

*Does away* with paper and  
parchment wrappers

Order THERMOS No. 15 Series with the  
eye-catching map-of-the-world canister—  
**IN FULL, SPARKLING COLOURS**  
—the only vacuum flasks with this  
revolutionary new stopper

**MOST WHOLESALERS HAVE STOCKS**

No. 15½ Minor (8 fl. oz.)	Selling price incl. P. Tax	7s. 2d.
„ 15 Standard (16 fl. oz.)	„	7s. 11d.
„ 1515 Major (26 fl. oz.)	„	11s. 9d.
„ 15Q Family (36 fl. oz.)	„	14s. 2d.

**THERMOS**  
REGISTERED TRADE MARK

**Backed by really strong Advertising**  
—A 6-WEEK CAMPAIGN IN  
National Dailies • National Evening Papers  
Provincial Evening Papers

*Bulk suppliers of . . .*

## DISINFECTANTS & ANTISEPTICS

- CARBOLIC FLUIDS  
Black and White types  
with Co-efficients 2 to 24
- APPROVED FLUIDS  
(Under the Diseases of  
Animals Acts)
- PINE FLUIDS
- AROMATIC FLUIDS
- LYSOL B.P.
- LIQUOR—  
**CHLOROXYLENOLIS B.P.**

Packed in 1, 5, 10 and 40 gallon drums

### THE PRINCE REGENT TAR CO. LTD.

BRETENHAM HOUSE, LANCASTER PLACE,  
STRAND, LONDON, W.C.2

Telephone: TEMPLE BAR 5801 (8 lines)

Also at:—PRINCE REGENT'S WHARF,  
SILVERTOWN, LONDON, E.16

Telephone: ALBERT DOCK 3311

## “ZORBO” (REG'D)

### Superfine Cotton Wool

This is a very old Trade Mark of ours and a product for many years in use by the Medical Profession and all those requiring a First Class Superfine Cotton Wool. Now packed in attractive white Cartons in various sizes and would be readily acceptable to your more exacting customers.

Of course this is just one of our Manufactures. We also supply in Cartons all BPC Dressings in Cotton Wool, Lint and Gauze.

Our products are obtainable from Wholesalers, but should you have difficulty a line to us will have prompt attention.

### ROBERT BAILEY & SON, LTD.

SURGICAL DRESSINGS MANUFACTURERS  
DYSART STREET, GREAT MOOR, STOCKPORT  
Phone: STEPPING HILL 3006/7 Grams: "UNDISPUTED" STOCKPORT

## QUEEN



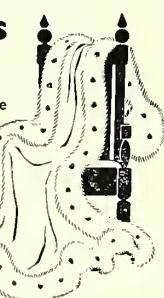
### Non Allergic BEAUTY PRODUCTS

THE SAFETY FACTOR IN  
EVERY DAY MAKE-UP

Queen beauty products form a complete range of toilet and beauty preparations, including lipsticks, specially for those women who have sensitive skins. Queen products contain no orris in any form, nor any other skin irritants AND ARE RECOMMENDED BY THE MEDICAL PROFESSION.

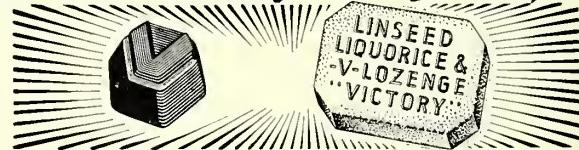
Obtainable from your Wholesaler  
or direct from . . .

BOUTALLS CHEMISTS LTD.  
60 Lambs Conduit St., London, W.C.1



## Victory-V

GUMS & LOZENGES for cold journeys



FRYER & CO. (NELSON) LTD. NELSON, LANCS

N.99

## TANNIC ACID AND DERIVATIVES

THE BRITISH DYEWOOD COMPANY LIMITED

19 ST. VINCENT PLACE, GLASGOW C.1

# INTRASEPT

- **INTRASEPT** consists of a highly concentrated alcoholic solution of carefully selected ingredients which afford a strong antibacterial effect coupled with excellent expectorant properties. Suitable for any inflammatory condition of the upper respiratory tracts, such as—

## BRONCHITIS, 'FLU, COUGHS, COLDS

- **COMPOSITION:** Iodum Resublimat., 4.1%; Liquor Ammon. Dil., B.P. 25%; Caffeine et Sod. Benzoas, 5.5%; Sod. Salicyl., 1.0%; Camphora, 5.0%; Oleum Menth. Pip., 1.5%; Alcohol, 45%.
- **GENERAL REMARKS.** 3 drops on sugar will afford an excellent prophylaxis against Spring 'flu and colds, while 8—10 drops can arrest a stubborn cough, reduce the lowering effects of bronchitis or relieve head colds and hay fever in a short time.

**RETAILS AT 3/2 PER 6 gm. DROPPING BOTTLE**

*Sole manufacturers :*

## RIDDELL PRODUCTS LIMITED

RIDDELL HOUSE, 10—14 DUNBRIDGE STREET, LONDON E.2 **PATA**

Telephone : B1Shopsgate 0843.

Telegrams : Pneumostat, Beth, London

BRANCH OFFICE:—Mansfield Chambers, St. Ann's Square, Manchester 2

*Enquiries invited for—*

**ASPIRIN B.P.  
OXYQUINOLINE  
and Compounds  
BARTURATES  
A FULL RANGE OF ALL BARTURATES**

ALL BRITISH MANUFACTURE AT OUR MODERN FACTORY AT BARNET

**PIERSON, MORRELL & CO. LTD.**

*THE ORIGINAL BRITISH ASPIRIN MAKERS*

Telegrams : Pierson Morrell Barnet      **BARNET, Herts.**

Telephone : BARnet 0723

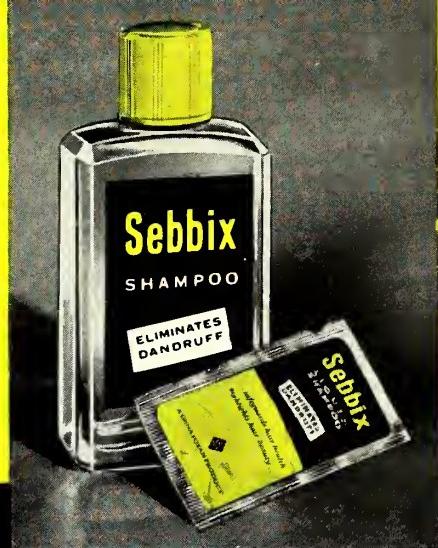
© 1970 Sebco

# Sebbix

SHAMPOO

ELIMINATES  
DANDRUFF





# Progress report on **Sebbix** S H A M P O O

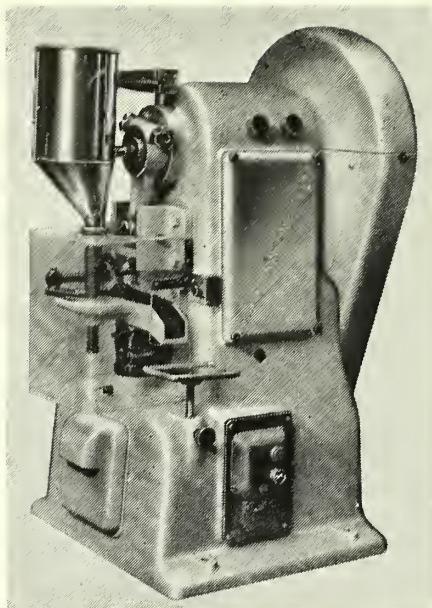
First introduced in our dermatological range, Sebbix shampoo met with instant success. Doctors not only prescribed Sebbix to patients : they started using it themselves. That was Spring 1953. In the Summer, 1954, advertising in the Medical and Nursing Press quickly created a wider professional demand. One year later, consumer advertising in test areas brought a swift and impressive

sales-response. *Sebbix was on the way up.* This Spring, Sebbix was launched in the National Press in large and dominating spaces. Present position? Sebbix sales for the first half of 1956 have far exceeded our most hopeful estimate. Very heavy National advertising will take place during the next 12 months.

*Sebbix is on the way up — to the top.*

*"Obtainable from your Chemist" This phrase appears in every advertisement.  
We shall continue to direct shampoo buyers to you.*





New L.B.I. Type Bench Tabletting Machine.

**S. W. WILKINSON & CO., LTD.**  
WESTERN ROAD, LEICESTER

Telephone: Leicester 21283.

Telegrams: Wilkinson, Leicester 21283

Engineers and Specialists in Pharmaceutical Machinery for over 50 years.



## ROTARY and SINGLE PUNCH TABLETTING MACHINES

## OINTMENT MIXING and GRINDING MILLS

## PUNCHES AND DIES FOR ALL TYPES OF TABLETTING MACHINES

Presses and Moulds for  
Gelatine Capsules

## MODERN EQUIPMENT

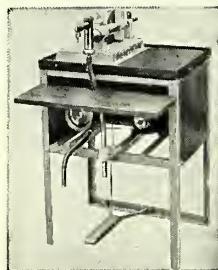


"WEBSTER'S"  
STAINLESS STEELWARE

ISAAC WEBSTER & SONS LTD.  
ABBEY WORKS  
KIRKSTALL  
LEEDS . 5.

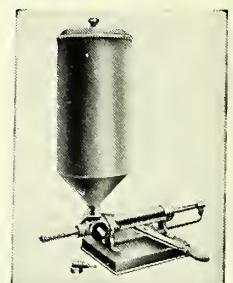
TELEPHONE  
51580  
LEEDSTELEGRAMS,  
ISAAC WEBSTER.  
KIRKSTALL

## From our range of FILLING MACHINES



Power-driven  
Volumetric Liquid  
Filling Machine.

No. 4. Hand-operated  
Tubes, Pots and Jars  
Filling Machine. ▶

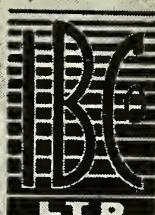


Please write for particulars of our comprehensive range of Filling Machines. We undertake to adapt our machines to individual requirements.

THE  
**"CENTRAC"**  
MACHINES

THE BANISTER STREET WORKS LTD  
18a, b, c, De BEAUVOIR ROAD, LONDON, N.1  
Telephone : CLIsold 0828

*Designers & manufacturers of high quality glassware*



**THE INTERNATIONAL BOTTLE CO. LTD**

140 PARK LANE  
MARBLE ARCH  
LONDON, W.I.

PHONE: MAYFAIR 6992 (5 LINES)

GRAMS: AUTREFOIS, AUDLEY, LONDON

Thoughts of travel make people think of KWELLS

This advertisement in the big national newspapers is a timely reminder of... Kwells. Although vast numbers will not need reminding. They know from past experience that Kwells are effective—and safe.

# KWELLS

PREVENT TRAVEL SICKNESS

for the whole family

How nice to know, before the start, that everyone will enjoy the journey—even little Janet, who usually "reacts" to the slightest wobble. The Kwells-protected family faces any journey confidently, for Kwells are the most effective preventers of travel sickness. Official tests

Sell them what they want

at the price they want to pay

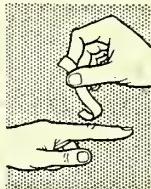
KWELLS

1'6

From chemists only

E. Griffiths Hughes Ltd., P.O. Box 407, Manchester

**There's nothing quite like it!**



When customers need Prestoband—they need Prestoband: there's nothing quite like it. More than a bandage, not a plaster—Prestoband provides a quick, neat dressing that allows the skin to breathe and helps the wound to heal. And it comes off as easily as it goes on: no painful tugging, no unpleasant sticky mess. Customers who know Prestoband, will demand it—any who don't, will thank you for recommending it.

## PRESTOBAND

THE ANTISEPTIC SELF-ADHESIVE BANDAGE

*Sticks to itself, but NOT to the skin!*

Generous trade terms. Packed in attractive counter display outer. 3 widths: 2", 1" or  $\frac{5}{8}$ " at 1/6, 9d, or 7d a 4-yard roll.

MADE BY VERNONS OF PRESTON • SOLE DISTRIBUTORS IN THE U.K. ARE FASSETT & JOHNSON LTD., 86 CLERKENWELL ROAD, E.C.I • AND IN EIRE • FASSETT & JOHNSON (IRELAND) LTD., 6 CROW STREET, DUBLIN

Your own  
proprietary lines  
manufactured and  
packed in  
**AUSTRALIA**

Australia's high standard of living makes it a rich market for proprietary lines — chemists' lines, cosmetics, groceries, horticultural and veterinary products etc. To avoid difficult import restrictions, and freight and insurance costs, many manufacturers are now having their goods prepared and packed in Australia.

Since 1888

Simpson's Manufacturing Pty. Ltd., of Melbourne, Victoria

and Sydney, New South Wales, has been producing articles of this kind since 1888. They now list over a thousand clients from all parts of the world. Clients' specifications are faithfully followed and utter secrecy is observed. Distribution, marketing and advertising facilities in all states are available if required.

Further details and quotations will be gladly given without obligation.

**SIMPSONS**  
SINCE 1888

Barkly Avenue, Burnley, Melbourne, E.1., Victoria, Australia.

**What's Best for Baby is  
Best for you!**

## KUMFY - KIDDY BABY PANTS

Great strides are being made today in the plastic field. As new and better plastic film and sheeting become available, we use them for our baby wear—where possible at no extra charge—following our policy of only using the finest materials obtainable.

A new top quality plastic, which is softer, more pliable and harder-wearing, is being used for our baby pants. Other refinements will surely follow since improvements are continually being made in the sustained effort to secure perfection.

Also available in the "Kumfy Kiddy" range are Nylon Film pants and covered pants in rayon tricot and nylon.

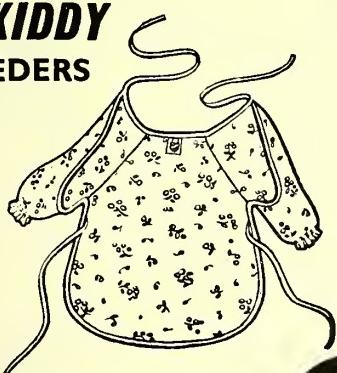
Waterproof and washable they carry the famous Lux Washability Certificate. Non-toxic and hygienic, they do not become 'tacky' when warm nor stiff and uncomfortable in cold weather.

All our pants are fully guaranteed—packed in hygienic transparent envelopes with a ready sales appeal in counter display cartons.



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An hygienic and intensely practical development, these sleeve feeders give complete protection to baby's clothes. Printed on plastic in attractive designs. Packed in display cartons containing twelve feeders.



### CHILDREN'S APRONS

Our wide range of fast-selling children's aprons in Plastic and Taffeta is printed with a selection of ever popular children's animal characters. Designs include Walt Disney's Mickey Mouse, Muffin the Mule, Prudence Kitten and the Daily Mail character Teddy Tail. Packaged in cartons to make attractive counter display.

Also included in the KUMFY-KIDDY range are COT SHEETS and BIBS.

**KUMFY KIDDY**  
WEAR

*Best for Baby!*

**KUMFY-KIDDY WEAR IS OBTAINABLE  
ONLY THROUGH WHOLESALERS.**

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*There's no off-season for*



## BOX'S INDIGESTION PILLS

*The Old Established  
Family Remedy*

P.A.T.A. Retail Prices:

1/5, 3/5, 5/8, 13/9, 25/- (incl. tax)  
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## A Good Product and Good Seller



for COLDS, CATARRH  
AND INFLUENZA  
Showing excellent  
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PRICE 1/6 per bottle  
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**DARK**  
with  
**SHADEINE**

Still the best hair tint. In all natural Shades. Stocked by all wholesalers. Trade Prices: 1 oz, 21/- per doz; 2 oz. 36/- per doz. Purchase Tax 90%. Retail Prices: 3/11 and 6/8½ per bottle respectively.

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SALES  
ARE  
ASSURED  
IF YOU  
STOCK  
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**THE SHADEINE CO. LTD.**  
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and a good new selling line for Pharmacists we introduce our sugar free pastille

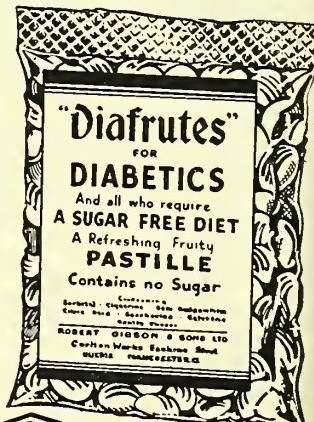
### 'Diafrutes'

a refreshing, fruity pastille for diabetics and all who require a sugar free diet.

packed in  $\frac{1}{4}$  lbs. to retail at 2/- per packet.

Also supplied in bulk.

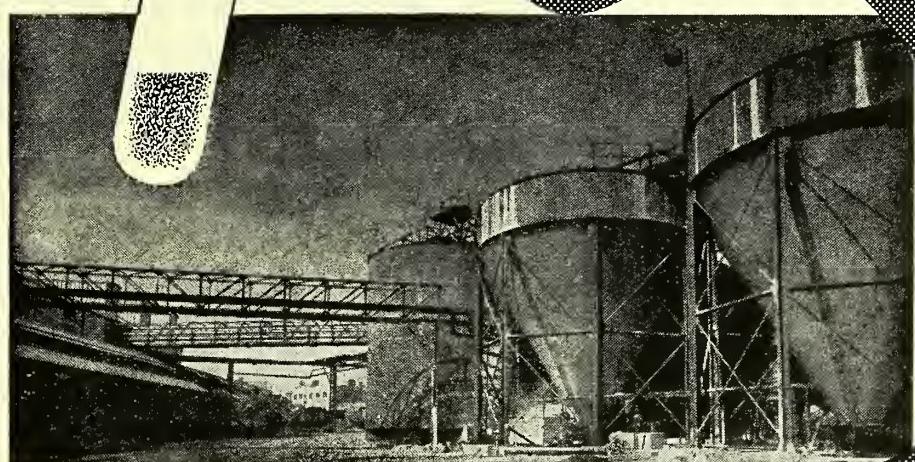
Pastilles:  
Gees Linctus, Glycerine and Blackcurrant, Catarrh.  
L. L. & C. Lozenges.



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MANCHESTER & LONDON

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BEHIND THE SUCCESS of The Washington Chemical Company's products in so many industries is a story of research and experiment which goes back more than a hundred years. Today, every product made by the company is backed by a research organisation whose facilities include chemical, physical, spectrographic, and rubber compounding laboratories which are constantly dealing with new problems in almost every field of industry.

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EXTRACT OF MALT  
WITH COD LIVER OIL (B.P.)  
WITH FLAVOURING

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Powders and tablets for the safe and  
speedy relief of headaches, colds, chills,  
rheumatic and nerve pains.

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Why are so many people drinking  
**Rose's**  
DIABETIC ORANGE SQUASH?

Rose's originally produced their Diabetic Orange Squash expressly for diabetics, but the demand for it has gone far beyond this particular field. Sales are climbing rapidly, because people are fast discovering that Rose's Diabetic Orange Squash is free from added sugar, and is a delicious aid to healthy slimness.

Ensure that your stocks are sufficient to meet the growing demand for Rose's DIABETIC fruit drinks—now backed by an interesting new advertising campaign in the Diabetic Journal and other medical publications.

ROSE'S ALSO PRODUCE LEMON SQUASH AND  
LIME JUICE AS WELL AS SUGAR-FREE  
MARMALADE IN THEIR DIABETIC RANGE



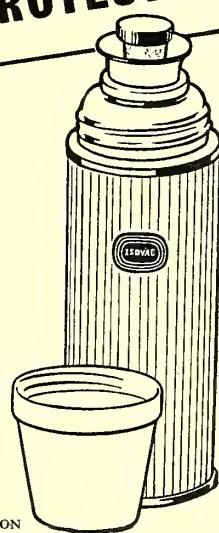
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**ISOVAC**

- Centre-sealed for greater strength.
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- Easy replacement.
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**WITH INNER CENTRE-SEALED AND  
TIP PERMANENTLY CORK-PROTECTED**

**6'6**

Standard Size 551  
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THE LOVELY .. DISTINGUISHED... LIGHTWEIGHT

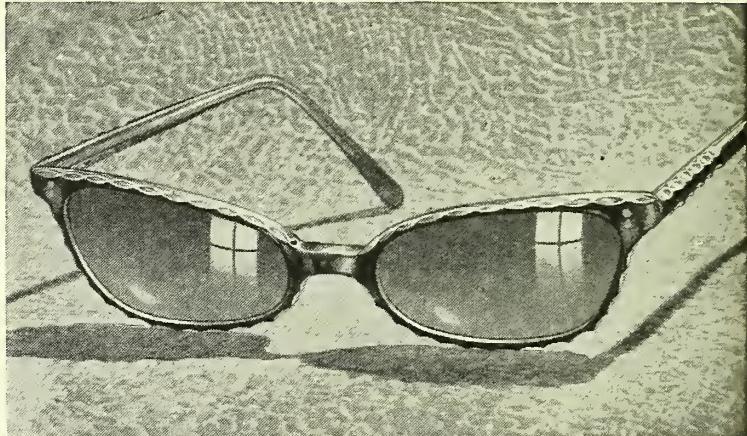
# Sunbather



Here is the latest eyewear style from the Continent designed especially for those whose leisure time is spent in the sun. It is one of the many styles we have available to meet all demands at prices to satisfy all markets.

**IDEAL FOR THE  
SUN-TAN ENTHUSIAST**

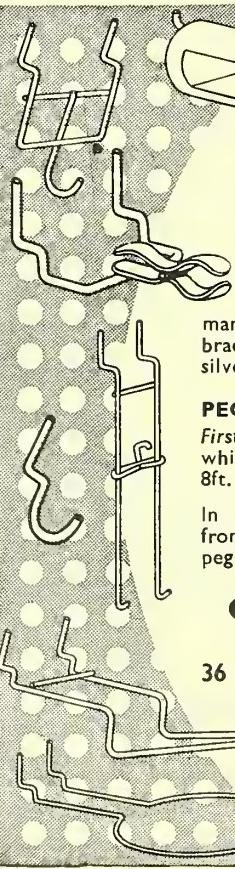
The upswept eyeshades on this two-tone scalloped style are petite yet they give adequate protection against glare while minimising shadows in sun-tanning. Stocked with smoked lenses or ombral shaded with graduated mirroring.



Fuller details gladly sent on request.

## Société des Lunetiers

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### PEG BOARD BRACKETS

for YOUR business

We have all the correct peg board brackets for displaying the goods you sell. There are many kinds to choose from. Our brackets are supplied in bronze and silver zinc finishes, from 15/- per doz.

#### PEG BOARDS

First quality. Stove enamelled in black, white, cream, green, burgundy. 8ft. x 4ft. from 56/-.

In natural colour, undercoated from 20/-. Fluorescent letters for peg boards, from 48/- per doz.

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LEEDS—62 Albion Street, Leeds 1  
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Agent for Northern Scotland—  
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for fine chemicals  
especially :

ASPIRIN B.P. "FRE-FLO"

SALICYLIC ACID B.P. & TECH.

SODIUM SALICYLATE B.P.

SALOL B.P.C.

VANILLIN 100%

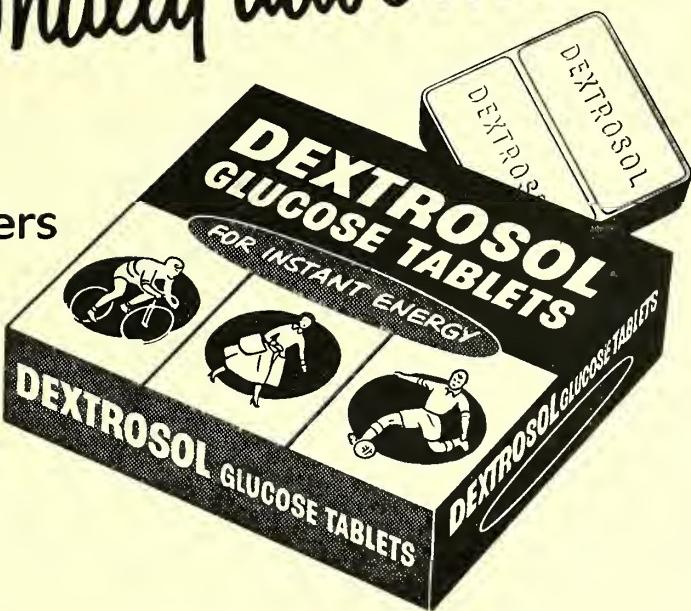
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in all important  
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to energy with 'Dextrosol' Glucose Tablets

*for extra business*



In packets of 16 tablets 10½d.  
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Also DEXTROSOL Powdered Glucose in  
1 lb. and  $\frac{1}{2}$  lb. packets — 2/9d. and 1/6d.

*extra profit → DISPLAY*

**DEXTROSOL  
GLUCOSE  
TABLETS**

**Now!**

*The Quick Selling Line  
it PAYS to DISPLAY*



Don't Forget  
VITA-GLUCOSE  
TABLETS ARE



SimpkinS

VITA GLUCOSE

- IN FOUR FLAVOURS
  - Strawberry
  - Orange
  - Lime
  - Standard (Lemon)
- 10d. per packet

THE ORIGINAL  
and Still the Best  
GLUCOSE TABLETS

A. L. SIMPKIN & CO. LTD., SHEFFIELD, 6

HOME TRADE

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BUCHU  
PAPAIN  
CALABAR BEANS

and all other Botanicals, Gums,  
Waxes, Essential Oils and Spices

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# "URICURE" TABLETS

The most popular  
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- or even the common  
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Packed in two sizes retailing at 1/9 and 3/6

SMALL SIZE

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PER DOZEN

THE ACTON PILL & TABLET CO. LTD.  
ASH VALE · SURREY

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SURE-SELLING STOCK!

OVER 150 YEARS REPUTATION  
**KEARSLEY'S**

THE ORIGINAL

WIDOW WELCH'S FEMALE PILLS

Over 10d BOX PROFIT by ordering 1 dozen  
4/3 size. Bonus given on every dozen (13)  
It pays to push this size.

Established 1787  
in the Reign of  
King George III

C. & G. KEARSLEY LTD.  
71 DARTMOUTH ROAD, LONDON, S.E.23

F. SCHUTZE & CO., LTD.

ESTABLISHED 1882

For "MASTER" BRAND SURGICAL TRUSSES  
SUSPENSORY BANDAGES  
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PERFUMERY BOTTLE WICKERERS in RAFFIA  
or SILK, plain or fancy, wide range of designs.  
Own bottles wickered at moderate cost.

Black Bull Works, Market Road  
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*Anticolic Teats and Babyblend  
are advertised every month  
to 12,000,000 women*

**DOUBLE-FEATURE ADVERTISING**

in top-circulation journals with a nation-wide appeal to mothers. That's Maw's advertising, designed to continue the phenomenal increase in the sales of their Anticolic Teats, Dinky Feeders and Babyblend—all part of a campaign to bring an increasing Nursery Products trade to chemists—and Chemists only. In addition, each month the spotlight is turned on other products featured in Maw's Baby Corner. By displaying Maw's Baby Goods you show your interest in every Mother's greatest interest.



**WIFE & HOME • FAMILY DOCTOR • NURSING MIRROR  
MOTHER • PARENTS • NURSERY WORLD • THE BABY BOOK**

**BABIES MEAN BIG BUSINESS FOR CHEMISTS**

*S Maw Son and Sons Limited • Barnet • England*



**Maw's Baby Corner**

is featured  
in half-page  
advertisements  
in "Woman"



It's NEW! Maw's Baby Powder. Soft and fine, delicately perfumed, it contains Cetrimide the modern antiseptic. Specially recommended by Baby Clinics. Stock up well to meet increasing demand. Priced to retail at 1/6d.

*The*  
**CHEMIST AND DRUGGIST**  
 CLASSIFIED ADVERTISEMENTS

Supplement

28 ESSEX STREET, STRAND, LONDON, W.C.2

**ORRIDGE & COMPANY**

**CHEMIST BUSINESS TRANSFER AGENTS AND VALUERS WHOLESALE AND RETAIL**  
**BRANCHES: BIRMINGHAM · SOUTHAMPTON · LIVERPOOL · SHEFFIELD · CARDIFF**  
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**LEASEHOLD SHOP** with flat over, recently completed in St. Mary Cray, Kent. Full particulars from E. O'Sullivan (Kenley), Ltd., Cray Avenue, St. Mary Cray, Kent. C 3865

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**DRUG STORES** situated in busy row of shops in increasingly thickly populated area S.E.5. Double-fronted, mahogany fittings, rent £80. Upper part let to police, £75. Bargain price for quick sale, £500, s.a.v., or let to experienced assistant for £3 p.w. all in. Phone for appointment. For. 1990 or For. 8878, 108 Wood Vale, S.E.23. C 3872

**ESSEX**, easy distance London. Attractive double-fronted corner shop (lock-up) in busy main thoroughfare. Takings last financial year £4,600, audited accounts. Capable of considerable increase. Owner selling on grounds of ill health. Price £2,100, 14 years' lease. Near offer considered. Box C 3862.

**APPOINTMENTS**

18/- per half inch (min.) and pro rata.  
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**ADMIRALTY PHARMACISTS**

Applications are invited from Pharmaceutical Chemists for posts as Pharmacists in Royal Naval Hospitals and Medical Depots at Home and Abroad. Salary scale £500 x £25—£575 x £30—£725. Starting pay according to previous professional experience. Allowance of £25 a year payable in addition to holders of recognised qualifications higher than the normal pharmaceutical qualification. Foreign Service Allowance payable overseas. Prospects of promotion to higher ranks. Superannuation benefits under National Health Service (Superannuation) Regulations 1950: deduction of 6 per cent, made from salary on that account. (Pharmacists due to be entered for compulsory National Service cannot be accepted as candidates for entry in this civilian grade.) Apply to, or call at: Medical Department, Admiralty, Queen Anne's Mansions, St. James's Park, London, S.W.1. C 5435

**BARNET GENERAL HOSPITAL,  
 WELLHOUSE LANE,  
 BARNET, HERTS**

Pharmacist

Applications invited for the post of pharmacist. The Pharmacy Department is new and well equipped. Salary £500—£725 per annum plus London Weighting. Applications stating age, experience, names two referees, to Hospital Secretary. C 271

**BARNET GENERAL HOSPITAL,  
 WELLHOUSE LANE,  
 BARNET, HERTS**

Locum Pharmacist

required. New and well-equipped department. Salary 16 gns. per week. Apply to Hospital Secretary, giving age and experience and two referees (Phone: Barnet 7421). C 5410

**CITY OF BRADFORD  
 HEALTH DEPARTMENT**

Pharmacist

Applications are invited from suitably qualified persons for this post at the MATERNITY & CHILD WELFARE SECTION. Salary in accordance with the Pharmaceutical Whitley Council, namely, £500 x £25—£575 x £30—£725.

Application forms to be obtained from the Medical Officer of Health, Town Hall, Bradford, 1, to whom they should be returned within 14 days of the appearance of this advertisement.

W. H. LEATHEM,  
 Town Clerk.  
 C 2540

**ENFIELD GROUP HOSPITAL  
 MANAGEMENT COMMITTEE**

Senior Pharmacist

required for duties within the Group. Salary Scale £575—£775 per annum.

Part-time Pharmacist

required for 5 sessions per week, for duties within the Group. Salary 31s. per session of 4 hours.

Apply to the Group Secretary, Chase Farm Hospital, The Ridgeway, Enfield, Middlesex, giving the names and addresses to two referees. C 5444

**GENERAL HOSPITAL,  
 NOTTINGHAM**

Locum Pharmacist

required for a period of four months, commencing as soon as possible. Salary sixteen guineas weekly. Apply giving full particulars to Group Secretary, General Hospital, Nottingham. C 268

**HIGHBURY HOSPITAL,  
 NOTTINGHAM**

Pharmacist

required. Whitley Council salary and conditions of service. Applications in writing to the Group Secretary, General Hospital, Nottingham. C 273

**KING EDWARD VII HOSPITAL,  
 WINDSOR**

(Category III Hospital)

Pharmacist

required at the above hospital. Apply with details of service and names of three referees to Secretary. C 5429

**LAMBETH HOSPITAL**

Locum Pharmacist

required at Lambeth Hospital, Brook Drive, S.E.11, for indefinite period. Salary 15 gns. per week or according to experience. Phone: Chief Pharmacist, Rel. 3804. C 249

**MID HERTS GROUP HOSPITAL  
 MANAGEMENT COMMITTEE**

Locum Tenens Pharmacist

required from beginning of August or, failing this, from August 20 to 25. Salary £15 15s. per week. Applications to Chief Pharmacist, St. Albans City Hospital, Normandy Road, St. Albans. C 5425

**QUEEN MARY'S HOSPITAL FOR  
 THE EAST END, STRATFORD,  
 LONDON, E.15**

Deputy Chief Pharmacist

£625 to £850 per annum, plus London Weighting.

or

Locum Pharmacist

£16 16s. per week. Apply with full details to Hospital Secretary. C 5434

**184 STRAND, W.C.2**

Tel.: TEMple Bar 9212/3 & 6340

**LAMBETH HOSPITAL,  
 BROOK DRIVE, S.E.11**

(Acute General Hospital, 510 Beds)

Senior Pharmacist

Applications are invited for the post of Senior Pharmacist in a department which is being enlarged with consequent increase in the number of staff. Salary (plus London Weighting) in accordance with Whitley Council Scale. Applications, stating age, experience, qualifications and names of two referees to the Secretary. C 256

**ROCHDALE AND DISTRICT  
 HOSPITAL MANAGEMENT  
 COMMITTEE,**

**BIRCH HILL HOSPITAL AND  
 ROCHDALE INFIRMARY**

Senior Pharmacist

required to work in either of the above general hospitals under the direction of the Chief Pharmacist. Salary in accordance with Whitley Council Scale.

Apply at once to Group Secretary, Central Offices, Birch Hill Hospital, Rochdale, C 5430

**ROYAL FREE HOSPITAL GROUP,  
 NORTH-WESTERN HOSPITAL,  
 LAWN ROAD, N.W.3**

Assistant-in-Dispensing

Applications are invited for the post of assistant-in-dispensing. Salary in accordance with Whitley Council Scale. Applications with names of two referees, should be addressed to the Group Chief Pharmacist, Royal Free Hospital, Gray's Inn Road, W.C.1. C 5373

**ROYAL FREE HOSPITAL,  
 GRAY'S INN ROAD, W.C.1**

Pharmacist

Applications are invited for the post of pharmacist at this hospital. Salary in accordance with Whitley Council Scale. Applications, with the names of two referees, should be addressed to the Group Chief Pharmacist, Royal Free Hospital, Gray's Inn Road, London, W.C.1. C 5374

**ROYAL FREE HOSPITAL,  
 GRAY'S INN ROAD, W.C.1**

Assistant-in-Dispensing

Applications are invited for the post of assistant-in-dispensing. Salary in accordance with Whitley Council Scale. Applications, with names of two referees, should be addressed to the Group Chief Pharmacist, Royal Free Hospital, Gray's Inn Road, W.C.1. C 5374

**SHEFFIELD NO. 1 HOSPITAL  
 MANAGEMENT COMMITTEE**

Pharmacist

Applications are invited for the appointment of pharmacist at the City General Hospital. Salary scale £500 x £25 (3)—£575 x £30 (5)—£725.

Apply, giving full details of age, qualifications, experience, etc., and the names of two persons for reference, to the Group Secretary, Nether Edge Hospital, Sheffield, 11. C 5443

**STAINES GROUP HOSPITAL  
 MANAGEMENT COMMITTEE**

Pharmacist

required at Ashford Hospital, Ashford, Middlesex, on salary scale £500—£725 per annum, plus London Weighting. Post now vacant. Applications, stating age, qualifications and experience, with copies of up to three recent testimonials, to Medical Director of Hospital immediately. C 262

**Appointments—Continued****STAFFORDSHIRE GENERAL INFIRMARY,  
STAFFORD**

Locum Chief Pharmacist

required. Any two-week period August or September. Whitley Council rate of pay. Apply to Group Secretary, Stafford H.M.C., 13 Foregate Street, Stafford. C 5424

**STAINES GROUP HOSPITAL MANAGEMENT COMMITTEE**

Locum Pharmacist

required at Ashford Hospital, Ashford, Middlesex. Salary 16 gns. per week. Applications, stating age, qualifications and experience with copies of up to three recent testimonials to Medical Director of Hospital immediately. C 260

**ST. ALBANS CITY HOSPITAL,  
NORMANDY ROAD,  
ST. ALBANS, HERTS**

(General—384 Beds)

(a) Senior Pharmacist (Category III)

(b) Pharmacist

Applications are invited immediately for the post of Senior Pharmacist (Category III) at the above Hospital within easy reach of Central London.

Pharmacist also required. This is a newly created post to meet the needs of a busy and expanding department, and would be suitable for a newly qualified person. Whitley Council salaries and conditions. Applications stating age and experience, to the Chief Pharmacist. C 5426

**ST. MARGARET'S HOSPITAL,  
EPPING**

Pharmacist

required at the above hospital. Salary and conditions of service in accordance with those laid down by the Pharmaceutical Whitley Council. Apply giving details to Superintendent of hospital. C 5400

**ST. GEORGE'S HOSPITAL,  
HYDE PARK CORNER, S.W.1**

Senior Pharmacist

male, to take charge of galenical laboratory and do one evening dispensing duty a week. Salary in accordance with Whitley Council scale. Apply in writing to Chief Pharmacist. C 5454

**ST. PETER'S HOSPITAL,  
CHERTSEY, SURREY**

Pharmacist

required. Salary £500—£700 p.a. according to experience. Whitley Council conditions. Accommodation available for single woman at £135 p.a. Applications stating age and experience with names of two referees to Hospital Secretary. C 5417

**THE LONDON HOSPITAL, E.1**

Senior Pharmacist

Experienced pharmacist required for this post in Category V Teaching Hospital. Age, qualifications and experience to Secretary, The London Hospital, Whitechapel, E.1. C 272

**TOOTING BEC HOSPITAL,  
TOOTING BEC ROAD,  
LONDON, S.W.17**

Pharmacist

required at the above hospital. Salary and conditions of service in accordance with those laid down by the Pharmaceutical Council plus London Weighting. Apply giving details to Superintendent of hospital. C 5448

**SITUATIONS VACANT**

12/- for 36 words (min.) then 4d. per word.  
Box 2/-

**RETAIL (HOME)**

**BANSTEAD, SURREY.** Lady assistant required for counter, display, stock, etc. Staff of four. Most agencies. Good pay. Holiday this year. Apply stating age, experience, etc., to Skidmore, Chemist, 30 High Street, Banstead. Phone Burgh Heath 720 (after 7.0 p.m. or Sunday Burgh Heath 2024). C 3821

**DONCASTER CO-OPERATIVE CHEMISTS, LTD.**, require the services of pharmacist (male or female) as branch manager, 44-hour week; minimum annual salary £840, bonus increments for sales increases. Rota duties are additional payments. Applications with usual particulars to Superintendent Chemist, Doncaster Co-operative Chemists, Ltd., P.O. Box 20, Doncaster. C 263

**LONDON, W.I.** An interesting and varied job embracing retail, wholesales and surgical instruments and appliances. Suit young man (National Service completed) with retail experience (not necessarily dispensing) who wishes to leave a dead-end job for one with much wider prospects. Only applications giving fullest details of salary, experience, etc., considered. Write suggesting suitable time for interview to Box C 3824.

**MALE DISPENSING ASSISTANT** required, with knowledge of photography. Modern pharmacy; congenial atmosphere; city hours; top wages. Please write full particulars to W. B. Hubble, 79 Kingsway, W.C.2. All letters will be answered. C 5447

**MANAGER OR MANAGERESS**, locum or permanent, required, would suit newly qualified pharmacist. Hours 9 to 6 p.m. Half-day Thursday; no Sunday rotas duties. Very good supporting assistant. Apply by letter or phone for interview, Leslie Martyn, Ltd., 34 Dalston Lane, London, E.8. C 3793

**MIDLAND AREA.** Senior stocktaker required. Must have had several years' experience in pharmacy. Substantial wages. All expenses paid. Permanency. Apply Box C 259.

**NORTH LONDON.** Assistant required chiefly for dispensing for business situated in Tottenham. Newly equipped dispensary. Hours 9 a.m.—6 p.m. Thursday 1 p.m. Salary according to age and experience. Three weeks' holiday a year. Permanent position. Please apply to Box C 5413.

**PHARMACIST** (male or female) for shop. New housing estate. Modern 2-bedroom flat available. Full particulars of experience and salary (profit sharing or partnership would be entertained). Milo Turner, Chemist, Tamworth. C 3848

**SOUTHALL.** Pharmacist required with interest in photography to manage a good-class establishment in this area. Splendid opportunity for promotion with good supporting staff and development is assured. Flat accommodation can be provided if desired. Apply with full details stating when available for interview to Box C 3844.

**SUPERINTENDENT MANAGER.** Private limited company has vacancy on board of directors for experienced pharmacist (either sex) for full-time duty in busy dispensing business in S.W. London. Good salary paid. Small capital investment arranged, if desired. No living accommodation available. Apply, with details of age, experience, etc. Box C 3870. C 3867

**TWO PHARMACISTS** required for the position of Branch Manager, male or female. Generous salary, easy hours, Saturday half-day, and a modern flat will be available in August/September. Applications in writing stating age and experience together with copies of recent testimonials to the Chief Executive Officer, Heckmondwike & District Co-operative Society, Ltd. Endorse envelope "Chemist" in top left-hand corner. C 3867

**VACANCY** occurs for an experienced junior male assistant. Busy dispensing and general retail routine. No Sunday duty; holidays honoured this year. James Tomlinson, M.P.S., 63 Oxford Road, Burnley. C 3795

**WALES, mainly south.** Competent stocktaker required with personality. Apply Orridge & Co., 184 Strand, London, W.C.2. C 255

**WANTED, PHARMACIST.** Male or female, as superintendent. Wages £16 per week. Good hours and conditions. No Sunday work. Private house available rent free. Full particulars on application to the Garnddaffith & Varteg Co-operative Society, Ltd. C 3856

**WINDOW DRESSER** required for group of pharmacies, mainly in the South London area. Applicants must be trustworthy, have excellent references, and a flair for bright sales windows. Please give all details of age, previous experience, approximate salary required, to Managing Director, Arnold M. Gee, Ltd., 12 High Street, Colliers Wood, S.W.19. C 3874

**WOODFORD.** Pharmacist of proved ability required for attractive and modern shop with good dispensing connection. There is an excellent opportunity for a substantial salary and bonus. Good supporting staff and modern equipped dispensary, etc. Permanency with superannuation benefits. Accommodation available if required. Apply with full details stating when available for interview to Box C 3843. C 261

**LOCUMS WANTED**

**LOCUM TENENS PHARMACISTS** are required for an extended tour of duties in the London and Suburban districts. Permanency at conclusion of tour if desired. Hours 9 a.m. to 6 p.m. Paid holidays. Salary and expenses basis. Applications to Chief Pharmacist, London Co-operative Chemists, Ltd., Grange Road, Leyton, E.10. C 3845

**WHOLESALE**

**ALLEN & HANBURYS, LTD.**, Bethnal Green, E.2, invite applications from pharmacists between 26-30 years of age, for positions as representatives in North-east and South-west Scotland. Full training given in London. Salary, expenses, car provided, pension scheme. Apply in writing giving details of age, qualifications, and experience to Personnel Manager. C 5403

**ADMINISTRATIVE POST.** Young man, intelligence and initiative, not afraid responsibility, required by small rapidly expanding manufacturing chemists N.W. London. Scope for right applicant prepared identify himself with our interests. Box C 5401.

**A LABORATORY AND DEVELOPMENT CHEMIST**

Aged 25 to 30—B.Sc.(Pharm.) or Ph.C. is required by a well-established firm of manufacturing chemists marketing pharmaceutical products, in Lancashire. The position is attractive and offers excellent scope for advancement to a man who is both able and willing to contribute his share to the efforts of a well-integrated team operating a progressive company policy and who know of this advertisement. Applications, stating age, relevant personal information and full details of experience should be addressed to "Managing Director," Box C 5408.

**AN EXCEPTIONAL OPPORTUNITY** arises in an old-established firm of manufacturing and wholesale chemists in South Midlands for a young qualified chemist. Wholesale experience and a good record as a representative would be an advantage. The post offers excellent prospects for the right type of man with ability, ambition and initiative. Candidates should possess a comprehensive knowledge of ethical specialities. Applications in own handwriting giving age, full personal details, education and experience, together with recent photograph, if available, to Managing Director, Box C 3875.

**A SENIOR REPRESENTATIVE** with wide connections and contacts among grocers and chemists in Essex and the Eastern Counties would be welcomed by a company of long-standing repute. Terms of engagement are excellent in every respect. All letters will be held in strict confidence. Please write fully to Box C 5433.

**DAE HEALTH LABORATORIES, LTD.**, manufacturers of Valderma Antiseptic Balm, Veet, etc., require a salesman with experience of selling to chemists and stores in the London area. The vacancy occurs through the death of the man who has worked the territory for the past 15 years. Post offers a permanent and worthwhile opportunity to the right man. Candidates should be between 30-40 years, possess own car and prepared to work hard. Attractive salary, commission and expenses. Write with complete confidence giving full details as to education and career to date to the Managing Director, at 17 Berners Street, London, W.1. C 5442

**H. E. DANIEL, LTD.**, St. Bernard Works, London, S.E.19, suppliers of raw materials to the following trades, require a representative to call upon mineral water and confectionery manufacturers, perfume and soap manufacturers, manufacturing chemists and wholesale druggists, in London and Home Counties. Experience desirable. Salary, commission, superannuation and car provided. Apply in confidence, with full details to the Managing Director. C 261

**LABORATORY ASSISTANT** required by manufacturing chemists, to assist works manager. Duties partly clerical. Five-day week. Apply Matthews & Wilson, Ltd., 6 & 8 Cole Street, London, S.E.1. C 5387

**MEDICAL REPRESENTATIVE**

with pharmaceutical or medical background required by large firm of manufacturing chemists to interview doctors, hospitals and chemists in South and South-west Counties; residence in Southampton or Bournemouth preferable. Car provided. Salary and expenses. Pension scheme. Apply giving age and full details of qualifications and experience, and stating salary required. Box C 5432.

**MEDICAL REPRESENTATIVE** required by well-known ethical house to take over established territory comprising Surrey, Sussex and part of Hampshire. Brighton resident preferred. Previous experience of this work desirable but not essential. Good knowledge of pharmacy and car ownership necessary. Commensurate remuneration with pension and life assurance to successful applicant. Full details, in confidence, to Box C 5382.

## HULL CO-OPERATIVE SOCIETY LIMITED

*Applications are invited for  
the position of*

### SUPERINTENDENT PHARMACIST

Society's membership 70,000; annual trade £6,251,000. The successful applicant will require to have a comprehensive experience of branch drug and branch chemist organisation, with ability to control an extensive Warehouse. The department, comprising 5 drug shops and 2 chemists' shops, has an annual trade of £110,467 and all grocery branch supplies, to the extent of £137,494 per annum, are made from the Drug Warehouse. National Insurance prescriptions 34,607 per annum. It is recognised that there is considerable scope for improvement. Modern housing accommodation available and Superannuation Fund (with transfer clause). Applications stating salary required to be received not later than Wednesday, 25th July, 1956, endorsed "Superintendent Pharmacist" and addressed to Mr. A. Barnes, General Manager & Secretary, Hull Co-operative Society, Ltd., 26 Jarratt Street, Hull.

C 3836

### MEDICAL REPRESENTATIVE

A leading pharmaceutical company is seeking applicants for a position as Medical Representative in South London. Candidates should have a pharmaceutical or scientific background. A position of greater responsibility is vacant at present time and candidates should be sufficiently ambitious to qualify for promotion. Substantial salary and full expenses. Car provided. Contributory pension scheme. Applications, which will be treated in the strictest confidence, should be addressed to: The Sales Manager, Upjohn of England, Ltd., 4 Aldford Street, Park Lane, W.1.

C 5427

### PRODUCTION MANAGER

Applications are invited for a senior position of Production Manager at a new factory which is now being completed in South Manchester. Applicants should preferably be pharmacists or possess a scientific qualification, be experienced in production control of pharmaceutical preparations and have the necessary administrative ability to operate this department. A salary will be paid that is commensurate with the importance of the appointment which is superannuated. Applications, which will be treated with strict confidence should contain full details of age and experience and be sent to The Director, Geigy Pharmaceutical Company Ltd., Rhodes, Middleton, Manchester.

C 5431

### RETAIL VACANCIES — OVERSEAS

A VACANCY EXISTS for a pharmacist (single man) for service in E. Africa with a company with retail branches in Nairobi, Dar-es-Salaam, Mombasa, Tanga, Arusha, Eldoret, Kampala, Kitale and Nakuru. Starting salary £1,100 p.a. (including cost-of-living allowance) with three annual increments to £1,190 p.a. and four further annual increments to £1,390 p.a. Tours are for four years with annual local leave followed by home leave on full basic pay plus half c.o.l. Contract renewable by mutual agreement. Kit allowance and free passage both ways. Non-contributory pension plan. Applicants must hold M.P.S. qualification of Great Britain or Northern Ireland. Apply, in writing, giving qualifications and experience to Box C 5445.

### EVANS MEDICAL SUPPLIES LTD.

#### Publicity Manager

A vacancy will arise in the Evans Medical organisation later this year for the post of Publicity Manager. The position is a senior one, attractive in scope and opportunity. It carries with it executive responsibility for the Company's public relations as well as for the management of its advertising and the creation of printed technical publicity material (with medical co-operation) for distribution to the medical and pharmaceutical professions.

Applications will be considered from those who have had adequate previous experience in the field of advertising and public relations. A pharmaceutical qualification is desirable but not essential. Superannuation scheme. Applications, which will be treated in strict confidence, should be addressed to the Managing Director, Evans Medical Supplies Ltd., Speke, Liverpool, 19.

C 5402

### LLOYD-HAMOL LTD.,

require experienced Medical Representatives for Yorkshire (Leeds), West Lancashire (Liverpool), The Midlands (Birmingham), South-west England (Bristol), North-east England (Newcastle), and Scotland (Glasgow), to join a training course to be held in SEPTEMBER. The positions offer the opportunity of joining an expanding British-controlled Company in the early stages of its development. The Company's products, the results of Swiss research, are unique and new products marketed will constitute important advances on existing therapies. A good salary will be paid and there is a bonus scheme; a Company car will be provided. Apply in writing to Lloyd-Hamol Ltd., Trafalgar House, 11 Waterloo Place, London, S.W.1.

C 5418

### SALES MANAGER

British Schering Limited have a vacancy for a Home Sales Manager in the Pharmaceutical Division. Applicants aged 30-40 years should have had at least four years' experience of sales management in the industry, and preferably have spent some time as medical representatives.

They should in particular be conversant with the drafting and implementation of Sales promotional programmes in their broadest aspects. The post provides full scope for initiative and advancement and an adequate incentive will be provided. Candidates will be eligible for the Company's superannuation scheme. The salary will be dependent on the experience and qualifications of the successful applicant.

Applications should be addressed, in confidence, to the Sales Director, British Schering Limited, 229/231 Kensington High Street, London, W.8.

C 5390

**C. L. BENCARD LTD.**

invite application for representatives from experienced men for Edinburgh and Southern Scotland, which has been regularly worked.

A car and full expenses are provided and there are bonus and pension schemes in operation.

Apply, in confidence, giving full details of experience, to the Sales Manager, C. L. Bencard, Ltd., Park Royal, London, N.W.10.

C 5406

**Situations Vacant—Continued**

**MANUFACTURING CHEMISTS** in Midlands require qualified chemist with manufacturing and analytical experience, progressive position. Full particulars stating age, qualifications, experience and salary required to Box C 3840.

**MEDICAL REPRESENTATIVES  
GENATOSAN, LIMITED,**

a member of the Fison Group, require Medical Representatives to cover general practitioners, hospital medical officers, etc., for these territories:

- (a) A territory based on Sheffield, comprising the Southern half of the East and West Ridings of Yorkshire,
  - (b) A territory based in the neighbourhood of Northampton, and covering the counties of Northamptonshire, Buckinghamshire, and Bedfordshire, and parts of Warwickshire and Hertfordshire,
  - (c) Part of South-west London, and the Eastern part of Surrey and Sussex.
  - (d) South-east London and Kent.
- These posts are well remunerated with incentives and good prospects for keen and energetic men possessing the ability and desire to make a success of this specialised work. A successful applicant will have to reside on his territory.

Full personal details with a summary of attainments and experience, with a preference for territory, should be addressed to the Personnel Officer, Genatosan, Limited, 12 Derby Road, Loughborough, Leics. Please quote reference MR.

C 5411

**MEDICAL REPRESENTATIVES** required by London manufacturing chemists to call on doctors, dentists, hospitals and chemists. Experience of medical detailing an advantage but not essential if applicant has a good pharmaceutical background. Applications invited from pharmacists, 25 to 40 years of age, stating experience and salary required. Box C 264.

**MERCK-SHARP & DOHME, LIMITED**  
**VACANCIES EXIST for MEDICAL RE-PRESENTATIVES in the following two important areas :**

- (1) Glasgow and S.W. Scotland.
- (2) South Lancashire.

Applications are invited from pharmaceutical chemists with or without previous experience in this type of work and from men without a pharmaceutical qualification but possessing a good background in pharmacy.

Applicants should be between the ages 23–35 and only men with a desire to make a successful career in Medical Representative work should apply. Good remuneration for the right type of men and company pension scheme is in force, Car provided.

Applications to: Sales Manager, Merck-Sharp & Dohme, Ltd., Hoddesdon, Herts. C 5438

**MEDICAL REPRESENTATIVE**: An opportunity occurs for a keen and competent person to join a progressive ethical house. Pharmaceutical qualification and experience in medical detailing an advantage. Advertiser's staff know of this appointment. Applications, stating age, experience, etc., to Sales Manager, Box C 5421, NORTH LONDON. Unqualified young man required for assembling orders in wholesale drug department. Permanent position with Saturday half-day. Salary according to age and experience. Apply Box C 5412.

**THE CHAS. H. PHILLIPS CHEMICAL CO. LTD.**

require a REPRESENTATIVE for N.E. ENGLAND based upon NEWCASTLE-upon-TYNE, to contact the trade and selected professions. Progressive position; salary, full expenses, superannuation, car provided. Sound retail pharmaceutical background essential. Please forward detailed applications to SALES DIRECTOR, 179 Acton Vale, LONDON, W.3. C 5450

**Managing Director or General Manager**

Pharmaceutical chemist with very successful record building ethical and popular branded line business including research, development, production, marketing and general organisation, having recently severed connection under circumstances of mutual respect and regret with important public company group after having held Managing Directorship of major companies in that group, now seeks further opportunity of utilising ability, experience and initiative. Box C 3846.

**AGENTS WANTED**

17/6 for 36 words (min.) then 4d. per word  
Box 2/-

**AGENTS** throughout the United Kingdom required by company manufacturing a unique Dog-Candy product and accessory. The company's products are well established in the Pet-Food trade, but offer considerable scope to energetic agents calling on chemists. Write Box C 3757, stating territory covered, number of retail contacts, and time taken to cover area. Exclusive agencies will be considered.

**AGENTS REQUIRED** with established connections retail chemists and hairdressers all areas to carry first quality real horn combs and vulcanite combs. W. Martin & Co., 7 Mallow Street, London, E.C.1 C 3876

**AN EXPERIENCED AGENT** covering Lincolnshire, Derbyshire, Nottinghamshire, Leicestershire, is offered attractive terms by a toilet paper manufacturer. Applicants should have long-standing connections with the wholesale chemists, grocers, co-operative societies. Every backing given from Head Office and the territory would be guaranteed. Box C 3878.

**SITUATIONS WANTED**

3/- for 18 words (min.) then 2d. per word.  
Box 1/-

**WHOLESALE**

**AVAILABLE** for London and Home Counties, senior representative or area manager, 20 years' connection wholesale, retail chemists, stores, Co-ops, multiples. 1955 turnover £65,000 in competitive field. Sound reasons for change. Box C 3834.

**COSMETIC CHEMIST**, B.Sc., 20 years' experience of manufacture and production seeks change for personal reasons. Enquiries to Box C 3873.

**EXPERIENCED REPRESENTATIVE**, available shortly, Wales territory, excellent record, pharmaceutical and commercial, joint representation of two firms considered. Box C 3822.

**REPRESENTATIVE** post required, Gloucestershire area, with firm of repute by keen energetic young man of 27. Unqualified but with 11½ years' trade experience (one firm). Box C 3863.

**TRAVELLER** seeks situation on commission basis, Central London only. Must be first-class line. Excellent references. Box C 3869.

**UNQUALIFIED (42)**, for past 10 years manager of packaging department for well-known East London manufacturing chemists, now seeks change. Preferably out of London. Sound knowledge of trade, keen and conscientious worker. Prepared to go anywhere. Minimum salary £750. Box C 3861.

**AGENCIES WANTED**

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**AGENT REPRESENTATIVE** with excellent connection chemists and stores, Lancashire and Cheshire, requires additional first-class agencies, proprietaries or imported sundries. Box C 3864.

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A NEW PRODUCT, for sale through chemists, etc. (six-figure revenue certain) is offered. Sound firm able to exploit nationally. Box C 3879.

MANUFACTURING CHEMISTS invite enquiries for the manufacture of "cake make up," rouge and similar products, using clients' own materials. Box C 5455.

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ALL KINDS OF BOTTLES, JARS, SCREW CAPS, cartons, packaging materials and manufacturers' stocks of all kinds bought at fair price for spot cash. We are buyers of merchandise of EVERY DESCRIPTION. Clearance Stocks. Discontinued lines. Surplus and Redundant Stocks. Should you have anything for disposal, please send us samples and particulars. Reliance Trading Co., 13 New College Parade, Finchley Road, N.W.3. C 153

WANTED to purchase, Aniline Colours surplus to holders' manufacturing programme. Apply Box C 5446.

WE WILL PURCHASE for cash a complete stock, a redundant line, including finished or partly finished goods, packing raw materials, etc. No quantity too large. Our representative will call anywhere. Write or telephone:—Lawrence Edwards & Co., Ltd., 6/7 Wellington Close, Ledbury Road, London, W.11. Tel.: Bayswater 4020 and 7692. C 140

LOOFAHS AND BATH BRUSHES. Supplies of various sized loofahs, loofah gloves and wooden back bath brushes are required continuously by a substantial organisation. Kindly send details, full descriptions and prices to Box C 3847. All replies will be acknowledged.

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**MISCELLANEOUS SALES**  
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NO. 1 PASCALL Pin-Disc Mill, No. 3 Pascall Ball Mill, and No. 2 stainless steel Morton Duplex Mixer. For further details and inspection write Box C 3866.

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SPECIAL OFFER! Approximate size 26" x 14". Individually transparent wrapped. Only 4/1d. per skin (minimum order 12 skins). Attractive show board free! Discount for quantities:—1 Kip (30) less 5 per cent.; 5 Kips less 7½ per cent.; 10 Kips less 10 per cent. Order now! County Chamois Co., Ltd., Rocky Lane, Aston Cross, Birmingham. C 5452

ABOUT 900 GROSS of 4-oz. limes clear glass bottles with metal-topped corks, and a large number of suitable fibreite containers for sale at low price. Write, The Birmingham Chemical Co., Ltd., Lichfield. C 5428

MODERN CHEMIST SHOPFITTINGS, drug ranges, wall cases and frameless sliding doors, display counters and showcases, all types of window fittings and display stands. D. Matthews & Son, Ltd., Complete Chemist Shop Fitters & Shop Front Builders, 14-16 Manchester Street, Liverpool. C 141

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DISPENSING. Nine months' training for examination for assistants-in-dispensing, Society of Apothecaries, may be taken at The London College of Pharmacy for Women, 7 Westbourne Park Road, W.2, Bayswater 0969. Apply Secretary. C 3868

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